Statistical Information Bulletin for Africa

No/Nº 15

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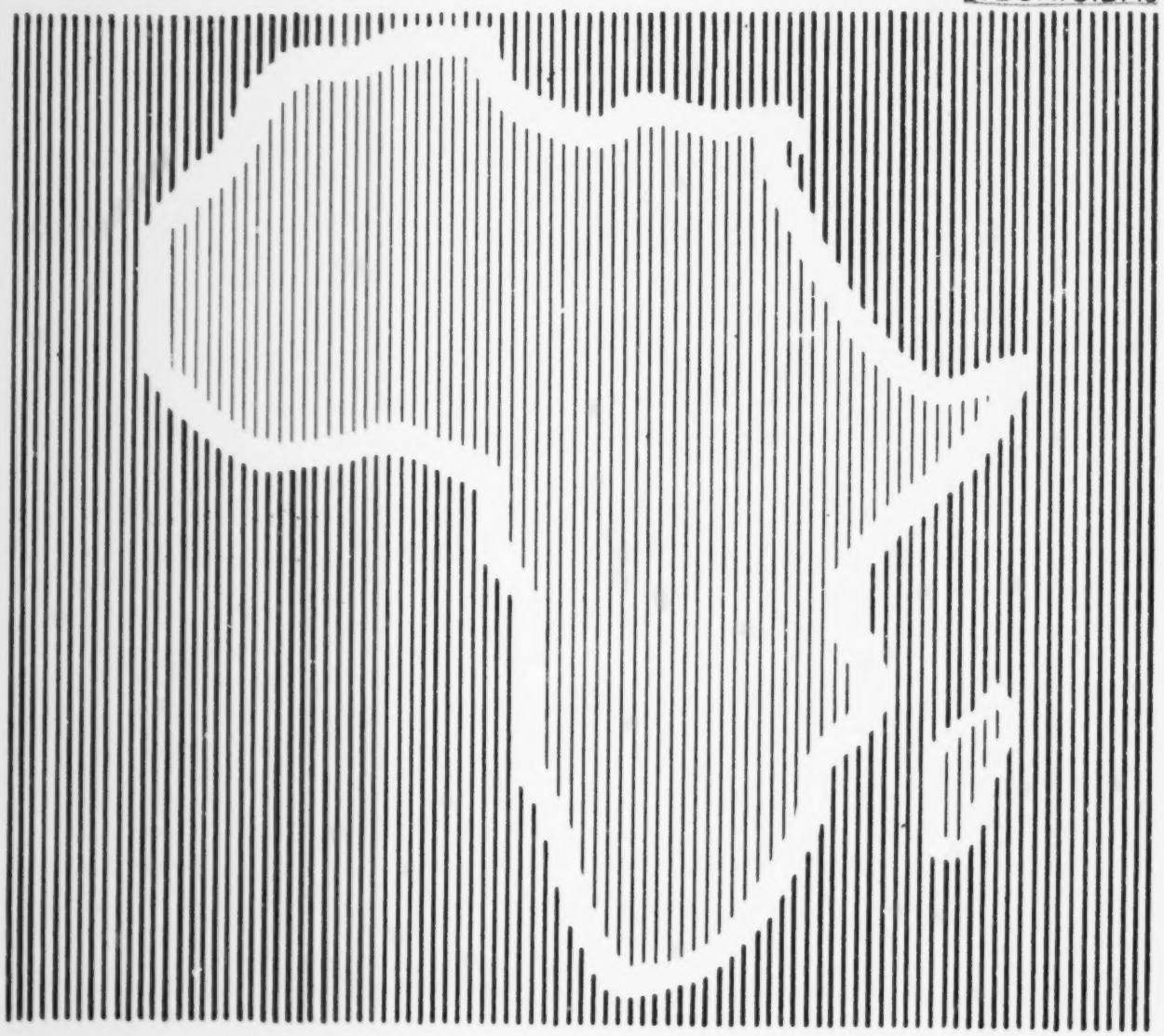

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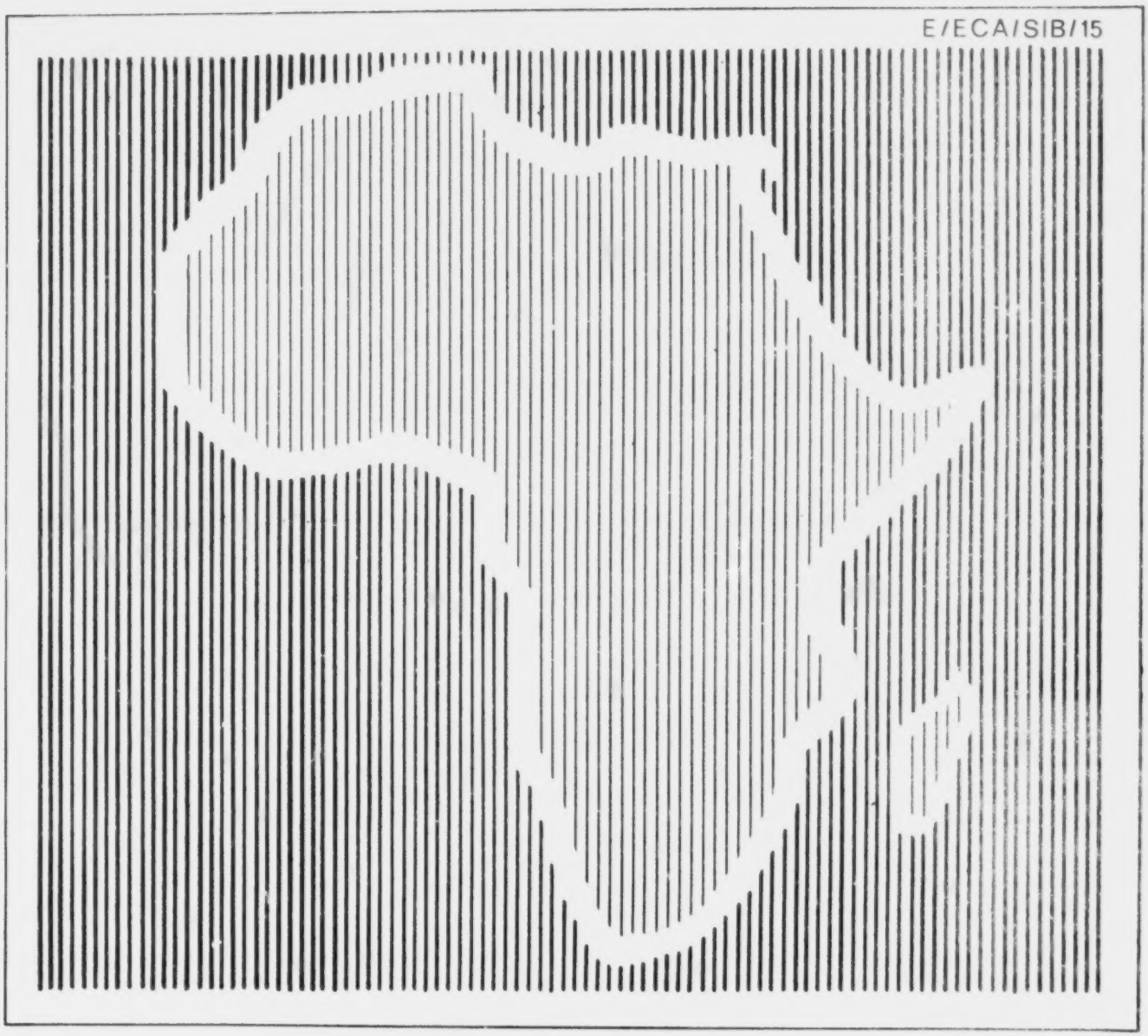

Bulletin d'information statistique pour l'Afrique

EDITORIAL NOTE

This issue of the Bulletin, like its predecessor, No.14, is devoted to a single subject - Internal Migration Statistics in Africa. The papers were originally prepared to be presented to a Working Group on Migration Statistics in 1982, which was cancelled due to lack of funds. Given the importance of this topic, however, it was considered appropriate that the papers should be given wider dissemination. Thus the idea to publish them in this issue of the Bulletin.

In conformity with the practice adopted for the previous issues, the papers in this issue have been given in their original language (English) with short summary in ECA's other working language (French).

NOTE DE LA REDACTION

Le présent numéro du bulletin est consacré comme le précédent, le n°14, à un sujet unique : les statistiques sur les migrations internes. La présente étude était initialement destinée à un groupe de travail prévu sur la question pour 1982. Toutefois, en raison des contraintes financières, ce groupe de travail n'a pu être réuni. Etant donné l'importance du sujet, il a été jugé nécessaire d'assurer une diffusion plus large à l'étude, d'où l'idée de la publier dans le présent numéro du bulletin.

Conformément à l'habitude prise pour les numéros antérieurs, les études ont été présentées dans la langue du texte initial et résumées dans une autre langue de travail de la CEA, à savoir le français.

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SAMPLE SURVEYS ON INTERNAL MIGRATION IN AFRICA, 1960-1980: SCOPE, METHODOLOGIES AND PROBLEMS

INTRODUCTION

Three periods can be identified in the collection of data and analyses of internal migration in Africa (Masser and Gould, 1975). The first phase was dominated by anthropologists and sociologists who, in an attempt to understand the causes and consequences of the movements, undertook extensive field investigations in small localities. The areas of study were chosen purposively and the preoccupation with exhaustive examination of small areas generally rendered the studies incapable of wider application. Examples include Wilson's (1941/42) work in Northern Rhodesia (Zambia) and Schapera's (1947) study in Bechuanaland (Botswana).

These early preoccupations with internal migration in Eastern Africa, where European mining and agricultural enterprises were established during the first years of colonial rule, focussed on circulatory movements and labour shortages and turnover (Mitchell, 1959). Circulatory labour migration involves workers shuttling between centres of employment, in towns, mines and plantations and the migrant's home base.

The second phase in migration data collection and analyses was made possible by the growing availability of population census data. Geographers took the lead in the exploitation of the new data on migration. The analyses leaned heavily on indirect questions - especially those on tribe, age and sex distribution to infer migration. The rationale employed for the use of tribal data was that each ethnic group occupies a spatially distinct locality and that members of other tribal groupings within that area must have migrated there. While such an assumption might have been valid for some remote areas, the ethnic admixture in especially urban areas and other centres of employment, such as mines and plantations, creates problems in unambiguously differentiating migrants from non-migrants. Examples of this approach include Southall (1961) for Kenya, Dak (1968) for Uganda, Hirst (1970) for Kenya and Tanzania and Harvey (1971) for Sierra Leone.

The use of the age and sex distributions from censuses was another approach employed for indirectly estimating internal migrations (**Clarke** (1960); Swindell (1970); Hunter (1965) Ominde (1968) Thomas (1968)). This method, too, is not without some difficulties. These include age misreporting and coverage under-reporting, which are prominent features of censuses in Africa. The existence of these errors in census age and sex distributions complicates the task of assigning differential spatial rates in the age distribution and/or sex ratios to migration.

The third phase in migration data collection and analysis has been characterized by the increasing use of the direct questions from the census, especially that on birthplace and with supplementing census data with sample surveys (Cairo Demographic Centre, 1973; Zachariah and Conde (eds.) 1981).

SAMPLE SURVEYS AS SOURCES FOR INTERNAL MIGRATION INFORMATION

The two main sources of migration data in Africa are the population census and sample survey. As has been mentioned, the recent phase in migration analyses has been marked by the increasing use of the direct questions included in the census - place of birth, length of residence, place of previous residence and residence in a specific locality in a stated period (e.g., X years, say) before the census.

The advantages of the population census data for migration studies include providing information for the description and measurement of the movement. (Zachariah, 1977). Also, it is only from this source that the magnitude of migratory movements in the country, especially from small localities, can be meaningfully assessed. Moreover, demographic and socio-economic information collected from the census can be classified for migrants and non-migrants alike.

However, migration being a multidimensional phenomenon encompassing temporal and spatial aspects cannot be adequately addressed by a census exercise, given the limited number of questions on any item that could be included. Accordingly, a census succeeds in capturing only a limited number of moves and the spatial units (destination and/or origin).

Also, analytically more sophisticated studies such as the analysis of migration differentials and selectivity that require more detailed data sources cannot be studied solely from census information. For example, analyses of migration differentials and selectivity that require current information about the migrant and his socio-economic environment before migration at the origin and the same information, after migration, at the destination can only come from carefully designed sample surveys.

That is, in short, those migration studies that attempt in-depth analyses must make use of carefully designed sample surveys to supplement existing population census statistics.

The experiences of African countries, within the two decades 1960-1980, in pursuing this objective is the purpose of this chapter. More explicitly, the study will attempt to summarise the methodologies, scope and problems of migration surveys within the period 1960-80, using a sample of African countries that have some documentation on their past surveys. The review will be done within the context of recent advances in this area. A number of authors have recently completed reviews about internal migration in developing countries, but from a global point of view. These include Bilsborrow's thorough analysis of technical sampling methodologies (1981), Goldstein and Goldstein's description of migration survey problems (1980) and Findley's summary of both the methodologies and problems of migration investigations (1982). This work, while drawing on these reviews, intends to make a more detailed summary of African experiences. It should also be mentioned that this review has been hampered by the fact that not all African migration surveys actually carried out have been well documented.

OBJECTIVES OF THE SELECTED AFRICAN SAMPLE SURVEYS

The objectives of migration investigations could be classified into three main categories - (a) descriptive (dealing with measurement of migration rates, differentials and selectivity), (b) determinants and (c) consequences. The selected migration surveys under review have been principally concerned with (a) and (b), supplementing census data, where these are available on these topics.

Explicitly, a popular theme of the surveys concerned understanding the problems of rural-to-urban migration. To achieve this purpose, some researchers conduct their surveys only at the urban end. The advantage of such surveys is that they are very similar to census data, so both sets of data can easily be compared. Also information of the current status of urban migrants can be collected without being seriously influenced by recall lapse. However, the migration status of migrants at the origin before the move especially on items such as occupational and educational status that may be affected by migration, can only be assessed by retrospective questions, answers to which are often confounded either by recall lapse or ex post rationalization. More importantly, the collection of contextual variables before and at the time of migration in the origin areas is also affected by similar problems.

The surveys by Oberai (1975) in Sudan, Sabot (1979) in Tanzania and Rempel (1981) in Kenya are examples of this type of migration investigations. Sabot's work was preoccupied with urban migration problems, especially those dealing with unemployment and under-employment. Rempel combined data from the 1969 population census and a 1965 survey to describe the patterns and determinants of internal migration in Kenya. Specifically, the data from the sample was used to assess the nature and causes of problems facing Kenya's major urban centres. Oberai focussed on Khartoum, Sudan's largest urban locality, in a detailed demographic study of internal migration, using sample survey data.

On the other side of the spectrum are also surveys that exclusively cover the rural implications of rural-to-urban migration. Such studies have the advantage that detailed contextual information about the rural areas, where the migration decisions are made, can be collected directly in the localities. Such information are extremely valuable, e.g., in the study of the motivation of migration. Also premigration characteristics of would-be migrants can easily be collected along with those of non-migrants. But post migration information of migrants from rural households in urban areas can only be acquired from proxy respondents, whose answers are usually not correct. Moreover, with reference to entire households that have moved, it is often difficult to get any information pertaining to them.

Olusanya's (1969) survey of rural-to-urban migration in Western Nigeria was of this variety. Olusanya's data was collected only in rural areas and included detailed information on community level variables. Similarly, the Senegalese survey of de Jonge, Klei, Meiling and Storm (1978) dealing with the consequences and determinants of migration in the Lower Cassamance (Senegal), derived its data from only selected rural localities.

Migration researchers in recent years make a special effort to collect information in both the urban and rural areas. Caldwell's (1968) Ghanaian survey was the first such type, although from the collected information and the allocation of sample sizes, the rural area was definitely over-represented. Caldwell's rationale for the selection of both rural and urban localities for his survey was that "important decisions about migration must occur at the rural end of the process· even if the major motive for migration is the "pull" in the town, that pull is only important as it is felt in the country side and in perhaps transmitted form in which it is felt".

Two surveys that were conducted in the 1970s that followed Caldwell's example by collecting samples from rural and urban areas were those by Byerlee, Tommy and Fatoo (1976) in Sierra Leone and Essang and Mabawonku (1974) in Western Nigeria. Both the Sierra Leonean and Nigerian studies had as their objectives the empirical investigations of the determinants and consequences of rural-urban migration. The econometric analyses of the determinants of rural-to-urban migration made use of the information pertaining to rural and urban areas as well as personal characteristics of migrants. Also the two studies addressed the consequences of rural-to-urban migration by analysing the inter sectoral transfers of funds.

SAMPLE DESIGNS

Survey statisticians designing demographic surveys in African countries are confronted by various problems, in particular the non-existence of an up-to-date sampling frame, e.g., a recent census, lack of street names and adequate aerial maps. (Kearl, 1976) Population census information containing some data on migration or pertaining to the movement do exist in several countries but are at the times of surveys, in many cases, too old for the location of migrants.

In addition, the following features of migratory phenomenon complicate the design of surveys: (a) the difficulty of defining the concept of migration since it embraces both spatial and temporal dimensions; (b) the movement pertaining simultaneously to two areas: destination and origin; and (c) the unequal spatial spread of migrants.

Given these formidable problems, it has not been surprising that quite a few of the earlier migration investigations in African countries have not been based on probability sampling; especially those by non-government researchers, for whom finance had been the all important constraining factor.

In his detailed review of migration methodologies in developing areas, Bilsborrow (1981) advocates the increasing use of probability sampling in the choice of either urban or rural localities in the cases that the findings of such investigations are to be generalised to the parent population. Kish (1965) on the other hand prefers purposive sampling when the survey is limited to only a few cities. He observed that a choice of the 'typical' city is best made this way than by probability sampling. Moreover, Findley (1982:47) posits that some surveys though not based on probability sampling serve useful purposes if (a) there is recognized similarity between the area surveyed and others with similar problems of concern to policy makers; judicious selection of study areas will enhance the chances that findings will actually prove valuable; and if (b) they yield clearcut, unequivocal results concerning a felt programme need or problem.

Olusanya (1969) for example, used purposive sampling for his choice of rural localities. Apart from the problems enumerated, migration sampling of rural areas involves the selection of several small localities in order to locate a sizeable amount of migrants spread out over a wide land area. This creates logistics problems, as Olusanya observes relative to his survey: "an attempt to make the selected villages representative would have involved listing all the thousands of them scattered over a land area of roughly 2,000 square miles and selecting a random sample which would probably have included villages, many miles apart, thus creating numerous administrative and financial problems".

But for the Senegalese survey by de Jonge, Klei, Meiling and Storm (1978), whose objectives included the assessment of social, economic and demographic factors that induce out-migration from the Lower Casamance and the consequences of the movement for the localities of departure, rural areas were selected purposively in order to represent specific economic zones. Explicitly, the four localities were selected because (a) they represented areas where economic projects have been implemented and (b) each area reflects distinct economic zones: Oussouye, a subsistence economy; Diatock, commercialized groundnuts and rice cultivation centre; Baraka Bouna/Pakao, diversified agriculture; and Birkama, banana plantation zone.

Urban oriented migration survey have one advantage over rural ones, namely that migrants are concentrated in a few main areas and therefore fairly easy to locate a sizeable sample size without incurring excessive transportation costs. Also, supervision of field personnel becomes simplified. But a major problem of surveys in especially sprawling urban locations lies in the omission in samples of those migrants that do not live or work in conventional dwellings, i.e., the so-called floating population.

Quite a few researchers usually select purposively, at least at the first stage, the urban sample. For example, in the study of rural-urban migration in Tanzania, Sabot (1979) purposively chose the primary urban sampling units. Dar-es-Salaam was preselected because "it /was/ the predominant non-agricultural economic centre, as well as the administrative, political and cultural focal point of the country". The other towns, Arusha, Mwanza, Tabora, Dodoma and Mbeya were included in the sample because of the following factors: (a) their current population size and economic importance; (b) geographical location and (c) designation of the towns as urban growth areas in the second Five Year Plan. Also, the towns of Tanga, Mwanza and Arusha were selected because (a) they were the principal centres for the location of industrial projects outside Dar-es-Salaam; (b) they were the principal urban centres of the north coastal, north central and the great lake geographical zones and (c) they were the sites of many new development projects since 1961. Probability sampling techniques were applied in the choice of the ultimate sampling units.

It is worth noting that probably more meaningful results capable of being given a national interpretation could have been obtained by taking these selected towns as one stratum and other towns as a second stratum, with probability selection of a few towns from the second stratum. This would have provided national estimates of ascertainable precision and could thus have assisted national planning and helped the policy-makers.

Caldwell's 1963-64 national rural-urban migration survey in Ghana, though it covered both rural and urban areas and included a very large sample especially in the rural areas was strictly speaking not a probability sample, since urban localities were selected because of their migration characteristics.

In recent years, sample surveys in Africa have been marked by careful selections of sample units, including the use of probability sampling and innovative techniques.

Essang and Mabawonku, for instance, in their study of rural-urban migration in Western Nigeria, divided the rural areas into two agricultural zones from which three villages each were selected by random sampling. The first stage of the survey took place in these six villages, at which time addresses of out-migrants to urban areas were taken. At the urban phase of the survey, of the 620 out-migrants for which addresses were available, some 480 were located and interviewed.

A similar approach was followed by Byerlee, Tommy and Fatoo (1976) in the much larger 1974-75 rural-urban migration survey in Sierra Leone. Apart from the tracer technique, the other innovative element of this national survey was that it was linked to a farm management investigation that was the source of most of the economic variables. In this survey the country was divided at the initial stage into eight economic regions to reflect various ecological or farming zones. Next, rural areas (i.e., localities with population sizes of 2,000 or less) were chosen, to form twenty-four primary sampling units. At the first phase of the migration survey interviews occurred in these selected sampling units. Nearly 2,000 out-migrants, fifteen years and over were traced in the urban areas where they were interviewed. Finally, interviews of heads of households, return migrants and non-migrants were conducted in the same rural areas.

CLUSTER SAMPLING METHODS

Given the absence and/or inadequacies of sampling frames in many African countries conducting migration surveys, resort has been made sometimes to cluster (area) sampling. In the above cited Tanzanian survey of Sabot, for example, the original intention was to select randomly 7,200 individuals or 1.6 per cent of the population of Dar-es-Salaam. But the author found out that no such list existed. Moreover, "even with such a list the task of identifying and finding 7,200 individuals dispersed over the whole city would have been insurmountable" (Sabot 1979: 252).

For a 1973-74 migration survey in Nigeria (Harrington, Osayinwese and McDevitt, n.d.) problems were created by the lack of an up-to-date sampling frame. The 1963 census was the only potential sampling frame, but it was ten years old, a definitely long time for a phenomenon like migration.

In the two cases, cluster sampling was applied. In Tanzania the choice was between using the 1967 mapped population census enumeration areas (EAs) which were large or aerial survey maps. Aerial survey maps were used for the five up-country grouped urban localities and the 1967 census EAs maps for Dar-es-Salaam.

In Nigeria, aerial survey maps, though also seven years old, were used and provided workable information. From these maps areas (clusters) were selected from the preselected cities (Ibadan, Kano and Benin) along with ten villages (near Ibadan) randomly selected according to estimated size.

Also, in two separate surveys of migration of Abidjan in the Ivory Coast and Yaounde in Cameroon (Rousset, Turlot and Vaurs, 1966: 339-352) cluster sampling was applied. The spatial units for the Abidjan survey were based on an exhaustive census of buildings, traditional and modern, while in Yaounde they were based on aerial photographs.

Cluster sampling is not however without disadvantages: Since migration distributions within any country are not evenly spread out spatially, all migrants do not have the same probability of being selected. Thus the use of cluster sampling might result in either under or over sampling of migrant populations (Findley, 1982).

This situation argues for future African migration surveys to pay sufficient attention to the problems of locating adequate numbers of migrants, especially when such criteria as recency of stay and a threshold value relating to age at migration are specified. Also the fact that migrants into the few urban localities of a country come from several localities in the origin areas, rural areas, a point previously alluded to, complicates their tracing.

Among various sampling strategies the following have been proposed to tackle this problem - (a) stratified sampling with disproportionate sampling fraction; (b) two phase sampling and (c) special lists such as in a multiplicity surveys; (d) multi-purpose samples; (e) use of controlled selection; (f) use of large clusters; (g) batch testing (Kish (1965) and Bilsborrow (1981:39-50)). The use of tracer techniques has also been advocated.

Of the methods listed above, the tracing technique has been among one of the methods experimented with in Africa. The surveys were the above-mentioned Sierra Leone 1974-75 of Byerlee Tommy and Fatoo (1976) and the Western Nigeria's Essang and Mabawonku (1974). The results of these experimentations with tracing have been mixed. Whereas the Essang and Mabawonku survey recorded a high percentage tracing rate 77 per cent (i.e., 480 out of 620), the Sierra Leone attempts were definitely unsuccessful, with a tracing ratio of only 25 per cent.

The following difficulties usually complicate tracing in African conditions resulting in either bias or inability to locate a sufficient number of original out-migrants. First, because of inadequate urban maps and addresses in especially new and growing parts of urban localities, this method is prone to omit certain types of migrants. Secondly, those usually traced - e.g., those who have left recently, with known addresses, those with ties with their rural locality, etc., are not often a random sample of urban migrants. In particular marginal migrants, especially the street dwellers, are most times omitted. Thirdly, tracing is an expensive and time consuming exercise. Given these problems, authors such as Bilsborrow caution against its uncritical use. Instead, such techniques as the two-phase sampling method and stratified sampling with disproportionate sampling fraction have much to recommend them.

SAMPLE SIZES

Broadly, a majority of the African migration surveys under review involved very small sample sizes: the range was 480 to about 30,000 persons.

Caldwell's Ghanaian investigation is among those consisting of a large sample. The emphasis of this study was about the rural dimension of rural-to-urban migration. Thus, a disproportionate number of the sample was drawn from this sector - 13,776 respondents (four-fifths of the total number for the survey). In order to cross-check answers from the rural survey, a smaller urban survey, consisting of 3,167 persons was also undertaken.

Byerlee, Tommy and Fatoo also chose a disproportionate percentage of their sample size from the rural areas - some 30,000 respondents. The urban survey involved about 800 persons along with some 150 return migrants interviewed in the rural areas. Also, Oberai had about 15,339 respondents in his rural-to-urban migration survey of Greater Khartoum, Sudan.

Apart from these three relatively large sample surveys, the other migration investigations consisted of small sample sizes, all under 10,000 persons. For example, Olusanya's Western Nigeria study of some villages comprised only 3,000 respondents; Rempel's (Kenya), 1,817 (of which 1,414 were actually interviewed), and Sebot's (Tanzania), 5,545 respondents.

SINGLE ROUND VERSUS MULTIROUND SURVEYS

Of the two data collection systems - the single round (SR) and multi-rounds (MR) surveys, the most popular method used in Africa has been the SR. The SR survey involves the collection of migration information at either the rural or urban area or both by means of a one-time investigation. Accordingly, some of the information, say on the characteristics of the migrants at origin or destination before and after migration, are acquired by means of retrospective questions. Retrospective questions, as has been discovered in other demographic and economic surveys, suffer from recall lapse, and are notoriously unreliable for income, remittance and motivation data.

Given the nature of migration, an ideal data collection method, especially for studies that pertain to, for example, the consequences, selectivity and adaptation of migrants and delineations of migration types should be able to provide current information of the migrant and his environment within at least two time periods - before migration (at the origin) and after migration (at the destination). Authors such as Stark (1978) and Oberai (1981) are of the opinion that the longitudinal survey is the best vehicle for such investigations. This type of survey, since it collects most of its information on a current basis, is likely to reduce significantly recall lapse errors.

But the use of longitudinal surveys for the generation of migration information is not without some disadvantages. Firstly, within rounds, changes are bound to occur in the sample population and/or households through mortality but mainly migration itself. Also the administration of such surveys makes heavy demand on high level manpower which many African countries cannot afford. Finally, MR surveys are relatively expensive compared with SRs.

One of the few African surveys on migration employing MR investigations are the two urban migration studies of Abidjan and Yaounde (Roussel, Turlor and Vaurs, 1968). In Abidjan, the MR survey of two rounds was conducted within an interval of one year, and in Yaounde, two surveys were also conducted, but within intervals of six months. Also in Abidjan, for control purposes, two other surveys were conducted within the intervals of four months.

Additionally, the two surveys differ in the criteria used for residence status. In Abidjan the criterion employed was residence in some part of the city for a period of six months or more or the intention to do so for the same time. In Yaounde, a complex qualification rule was employed, mainly based on actual length of residence but not intention. It is interesting to note that both surveys were part of multi-purpose urban surveys. These two surveys underscore the point of loss-due to follow-up, as within the periods of the investigations, 22.8 and 16.6 per cents of the original population had changed residences in Abidjan and Yaounde respectively.

Another longitudinal migration survey undertaken in Africa was in Liberia, based on the dual recording system - namely, a monthly household enumeration by a local resident enumerator and an independent semi-annual enumeration by a team of the Bureau of Statistics staff. The documentation on this survey (Rumford, 1972) is limited to the assessment of the case finding of migration by the above two systems. The main conclusion from this study was that the reporting of migration is not a random occurrence but is associated with the particular enumeration system, origin and destination of the migration, and the migrant's age, sex, and location of current residence. More explicitly, Rumford found out that the monthly recording system was a better recording system than the semi-annual system and that the urban coverage was higher than rural, taking into account all the variables such as age, sex, and location of residence.

Joel Gregory (1977) has made a detailed case study of the methodological difficulties encountered in the use of a complete life residence history record in a study of international and internal migration in Upper Volta. Though the focus of the study was mainly on international migration, some of the conclusions have relevance for the study of internal migration. The conclusions were that (a) there were substantial rounding - off of age at the time of the move; (b) but that it was not possible to unambiguously assess the attrition of the original sample through mortality and permanent international emigration.

SUMMARY AND CONCLUSIONS

The salient features of the new phase for migration data collection and analyses in Africa include (a) the increasing use of the direct questions from the population census (such as on birthplace especially, duration of residence, place of previous residence and residence in a specific locality a stated period before the census) and (b) supplementing census information, where available, with data from sample surveys.

The paper focused on African experiences in the use of sample surveys for the collection of data on migration. The problems of rural-to-urban migration featured prominently in the objectives of the study. Quite a few gave only partial treatment of the subject by limiting their data collection efforts to either the rural or urban areas. However, the more recent surveys have redressed this imbalance by treating both the rural and urban areas, the origin and destination of migrants, in the sample populations.

Relative to sample design, a recurring difficulty has been the lack of appropriate sampling frames - inadequate maps, out-of-date population census data, lack of street names in rural areas, etc. These difficulties have constrained some research workers who have resorted to purposive sampling for the selection of urban and/or rural localities. But in recent years, probability sampling designs are becoming the rule rather than the exception.

Cluster sampling has been a popular design used. This design, when combined with probability sampling for the locations of migrant populations, is not quite suitable for this purpose, given the uneven spatial spreads of migrants. This state of affairs argues for future African investigators to experiment with sampling techniques such as two-phase and disproportionate sampling.

Another characteristic feature of sample surveys in the past has been the small sizes of the sample. Given that in most cases, the collected data have to be tabulated within several small groups, and also given that the existence of high variance of factors pertinent to migration within and among the population in migration analysis. One would have expected that for these reasons the collection of migration data would be based on fairly large sample sizes. In this regard, Bilsborrow (1981:35) has put forward a suggestion about the minimum sample sizes: 1,000 households in urban areas and 2,000 in rural areas, with at least half of the households in each area containing one or more in- or out-migrants.

Methodological characteristics of migration surveys 1960-1980, Selected African countries

Survey Design Characteristic	Country	Cameroon	Ghana	Ivory Coast	Kenya	Nigeria			Senegal	Sierra Leone	Sudan	Tanzania
	Author(s)	Roussel et alia (1968)	Caldwell (1969)	Roussel et alia (1968)	Rempel (1981)	Essang et alia (1974)	Olusanya (1969)	Harrington et alia n.d.	Jonge et alia (1978)	Byerlee et alia (1976)	Oberai (1975)	Sabot (1971)
	Date of collection		1963		1968			1973-1974		1974-1975		1971
CHARACTERISTICS OF DATA SOURCE												
Other Household survey		X		X								
Migration survey			X		X		X	X	X	X	X	X
AREA COVERED												
National			X		X					X		X
Urban		X		X	X						X	X
Rural							X		X			
Urban & Rural			X			X		X		X		
PERSONS/H.H. COVERED BY MIGRATION STATUS												
Sending areas H.H. without migrants			X			X	X	X	X	X	X	
Non-migrants			X					X		X		
CHARACTERISTICS OF MIGRANTS												
Sex												
Male		X	X	X	X	X	X	X	X	X	X	
Female		X	X	X	X	X	X	X	X	X	X	
Age at the time of migration					20+			15+		15+	12+	14+
current												
Recency of move five years or less					X					X	X	
TYPES OF MIGRATION												
Analysed												
Rural-rural		X		X		X	X		X			X
Rural-urban			X		X			X		X		
Urban-urban				X						X		
Urban-rural												
TOTAL SAMPLE SIZE (HOUSEHOLDS)			2,367		1,091			7,160		2,050		-
Urban			585		1 091	480	-	5,982	-	825	5,459	5,545
Rural			1,782		0	N/A	3,000	1,178	5,400	1,900	-	-
Migrant			849		1,091	480	N/A	-	-	825	-	-
Non-migrants			1,518		0	-	N/A	-	-	150	5,459	N/A

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ANNEX I

AFRICAN SURVEYS REVIEWED

CAMEROON - URBAN MIGRATION SURVEY

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ENQUETES PAR SONDAGE SUR LA MIGRATION INTERNE EN AFRIQUE: 1960-1980: PORTEE, METHODOLOGIE ET PROBLEMES

RESUME

L'objet de ce chapitre est de présenter des observations sur la portée, la méthodologie et les problèmes des enquêtes par sondage sur la migration effectuées en Afrique au cours de la période 1960-1980, en se fondant sur un échantillon de pays disposant de données recueillies lors de leurs enquêtes menées.

Les principaux traits de la nouvelle approche de collecte et d'analyse des données sur les migrations sont: a) l'emploi croissant de questions directes dans le recensement de la population et b) le fait de compléter les renseignements provenant des recensements avec des données provenant des enquêtes par sondage.

Un thème en faveur dans les enquêtes étudiées était le rapport humain des problèmes de la migration des zones rurales vers les zones urbaines. Un nombre non négligeable de ces enquêtes n'ont traité que partiellement la question en limitant la collecte de données soit sur les zones rurales soit sur les zones urbaines, des exemples en étant Guerni (Soudan), Kotei (République-Unie de Tanzanie) et Rempel (Kenya) pour les enquêtes sur les zones urbaines et Diasenya (Algérie) et Flegg, Meiling et Storm (Sénégal) pour les enquêtes sur les zones rurales.

Concernant les plans de sondage, une difficulté permanente a été l'absence de bases de sondage appropriées - cartes défectueuses, données de recensement dépassées, inexistence de noms de rue notamment dans les zones rurales. Il n'est pas surprenant que la plupart des enquêtes rétrospectives sur la migration n'aient pas été basées sur le sondage aléatoire. Ces dernières années toutefois, les plans de sondage aléatoire deviennent la règle alors qu'ils constituaient l'exception avant.

Une autre caractéristique des enquêtes par sondage dans le passé a été la taille réduite des échantillons.

On a également eu recours au plan de sondages en grappes (unifilaire) qui, combiné au sondage aléatoire pour localiser les populations migrantes, ne s'avère pas efficace étant donné l'inégale répartition des migrants dans l'espace.

CONCEPTS, DEFINITIONS AND CLASSIFICATIONS FOR INTERNAL MIGRATION STATISTICS IN AFRICA

DATA COLLECTION SYSTEMS OF MIGRATION STATISTICS IN AFRICA

Several problems, in particular dealing with concepts, definitions, and classification affect the collection of data on migration in Africa. Certainly, the position has improved since 1965 when the opinion was expressed that "there is no method of measuring migration that is both theoretically superior and administratively feasible in Africa ..." (Lorimer et alia, 1965). In the 1960 and 1970 rounds of population censuses, many African countries by means of basically the birth-place question, collected some information on migration. Also a smaller number have made use of sample surveys.

However, the scope and quality of the tabulations published especially from the population census data have been limited.

The brief discussion of the various data collection systems which follows, will amplify the data situation with regard to migration statistics in Africa.

Population Census

Population censuses are increasingly becoming the most popular source for migration statistics in Africa (Goddard, Gould and Masser 1975). This has not always been the case. In the past there was an overwhelming dependence in French-speaking countries on demographic sample surveys for the provision of information on population variables such as migration (INSEE 1970). But, in English-speaking countries, from the beginning "the emphasis in demography ... has been on the manipulation and improvement of census data" (Gould 1976).

However, in the 1960, but particularly in the 1970 rounds of African censuses, most of the French-speaking as well as the English-speaking countries participated.

The statistics on internal migration from population censuses are derived in two ways -- one, by the inclusion of a direct question(s) on migration, and two, by the use of information, say on age and sex, distributions to indirectly estimate migration rates.

The four types of direct questions normally used to derive information on migration from censuses are - place of birth; place of last residence; duration of residence in the place of enumeration; and residence on a specific date before the census (for more on this see: UN, 1970 and Zachariah, 1977).

The derivation of internal migration information from surrogate measures such as age and sex distributions is predicated on the assumption that the movement is selective with respect to these variables. Thus, areal variations of these variables enable conclusions to be made concerning rates of mobility, subject to certain reservations (Masser and Gould, 1975).

Firstly that the areal variations of age and sex can also be attributed to changes in the other components of population change: fertility and mortality, as well as by migration. The part attributable to migration after taking into account natural increases is made difficult in Africa because the correct levels of birth and death rates are not usually known with certainty, nationally or locally.

Moreover, with regard to the estimates using only the age distribution, the results may be compounded by age misreporting, a prominent feature of censuses conducted within the region.

However, in the 1960s, in the absence of direct measures of migration in many African countries, analysts have used this approach (see, for example: Hunter, 1965; Clarke, 1966; Thomas, 1967; and Mabogunje, 1970).

The population census data are useful for the investigation of the national volumes and rates of migration. Data from this source provide information on broad patterns of migration for countries. Also the migration measures could be cross-classified with other items such as on age, sex, educational attainment, employment status and occupation from the same source.

However, given that the census is a major multi-purpose statistical operation, only a limited number of questions on any subject is usually included. Thus it is not suitable for migration studies that intend to investigate in-depth such topics as determinants and impact and delineate various types of migratory movements.

Sample Surveys*

Demographic sample surveys have been used to provide information on internal migration within the intercensal period in a few African countries. These surveys have usually taken two forms -- (a) specialised migration surveys and (b) general demographic surveys that include questions on migration.

The following are the major advantages of the surveys method as a vehicle for the collection of migration information (see Goldstein and Goldstein 1979 and Findley, 198). It facilitates experimentation with new questions and enquiry in detail into certain topics such as wages, cash transfers and psychological variables -- used in multivariate analysis of the movement -- that are not usually collected in censuses. Moreover, "they can be designed to classify information more easily according to carefully delineated rural and urban areas and thus facilitate the direct study of rural-urban, rural-rural, urban-rural and where appropriate urban-urban migration" (Goldstein and Goldstei , 1979).

However, migration surveys have their own shortcomings: because they emphasise certain facets of the movement or concentrate on certain areas such as urban or rural, their usefulness for generalization is sometimes much reduced.

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*For more on this, see the paper in this issue: "Sample surveys on internal migration in Africa, 1960-1980: Scope, methodologies and problems".

Although the French-speaking countries have in the past pioneered the sample survey approach for the collection of migration statistics, the most prominent in terms of both methodology and data collected in recent years of such endeavours is Caldwell's 1963 Ghana survey.

Population registers

A few African countries, namely Tanzania and Ethiopia, have instituted the recording of changes in residence as part of their local government machinery. When the system has developed to the stage where it will be able to provide information for the whole country, it will prove useful as a source of data for internal migration.

CONCEPTS, DEFINITIONS AND CLASSIFICATIONS

Migration

Migration is a multi-dimensional phenomenon whose proper description should take account of both space and time. This has created definitional and conceptual problems as distance and time are based on a continuum. Small wonder that 'there is little uniformity among, and even within, countries ... in the definition of an internal migrant' (UN, 1970).

With respect to space, migration involves simultaneously two localities, (a) an area of origin, and (b) an area of destination. Other spatial concepts that have been used for the definition of migration include physical distance, type of origin/destination, especially whether urban or rural and economic opportunity (Gould and Prothero, 1975: 39-50). Usually, an internal migrant has been defined as one who crosses a geographical or political (administrative) boundary. The geographical or administrative unit selected is usually called the migration defining area (IUSSP, 198).

The difficulty with the temporal aspect of the definition of migration centres around the length of stay continuously in the destination or absence from the origin. For some authors, migration must involve a sustained or permanent relocation in the place of destination. For example, according to Langlam, migration is "a relatively permanent moving away of a collectivity called migrants, from one geographical location to another ... " (1968:8).

Some aspects of population movement, for example, circulation, are not covered by this definition.

Other authors have argued that the time period required to qualify as a migrant should be inflexible and be determined for each individual case, taking into account the purpose of the data collection (Petersen 1968:270). Time intervals from six months up to ten years have been employed in migration surveys or censuses.

On the face of it, the use of physical distance appears ideal for the identification of migrations: e.g., a move of some minimum distance is considered migration. But this approach is not without problems (UN 1970). Firstly, the information on spatial movements are not usually presented in forms that can be easily converted to distance spanned. As a matter of fact if even the data is available, its processing and tabulation would be very formidable and not worth the effort.

A type of migration in African countries that is of great interest is rural-to-urban movements. The classification of origin and destination localities as rural/urban presents some definitional problems. One type of classification scheme frequently used is a population size threshold. Since over time rural/urban localities change status by natural increase, migration and reclassification, analyses involving more than one time period cannot usually keep abreast of these changes. Also if respondents are asked to classify their origin localities as rural or urban, the answers invariably will be affected by memory lapse especially on the part of long-term migrants who have not kept pace with changes of various localities. Some misrepresentation of rural places as urban is also possible.

Location reclassifications as urban or rural present intractable problems in a census, where usually the reference spatial unit is in terms of an administrative unit (e.g., district or provinces). From the information provided, it is difficult to classify at the office origin regions as urban or rural, with the reference unit as an administrative unit (Masser and Gould, 1975. 5).

The complexities connected with the definition of migration have increased because in addition to the criteria on distance and time, other factors have been emphasised, especially in sample surveys. These include intentions as to the permanence or temporal character of the move, changes in milieu or environment, whether the move occurs over a labour market area and reasons for the movement (De Jong and Fawcett, 1981).

CONCEPTS OF INTERNAL MIGRATION FOR CENSUS DATA COLLECTION PURPOSES

For data collection on migration, four questions have usually been included on census questionnaires, namely:

(a) Place of birth
(b) Duration of residence
(c) Place of previous residence
(d) Place of residence at a fixed prior date

(a) Place of birth

The question on birthplace is the most widely used to acquire information on internal migration in censuses. To get the information a question such as "where was this person born?" is included, to be investigated of all persons in the census.

A migrant is a person who is enumerated in a place different from the place where he was born; and a non-migrant is one who is enumerated in the place where he was born. The magnitude of the migratory movements depends on whether it is the village, town, district, lowest or highest administrative division that is used as the reference spatial unit.

The advantages of this question include its ease of understanding by the respondent. The question also enables migration information to be provided by geographical units on such items as lifetime in-migration by place of origin, lifetime out-migration by place of destination. The major disadvantage is that it is not time specific. This advantage assumes importance for various analyses on differential, assimilation and consequences of migration, as the characteristics and motivations of recent migrants (say with duration of stay of about 5 years) will definitely be different from long-term (say 10 or 15 or more years of residence). Another short-coming of the question is that it assumes a single movement directly from the locality of birth to the present destination, the area of enumeration. Also return migration cannot be inferred from the collected information.

(b) Duration of residence

Data on internal migration in a census is also provided by including a question on duration of residence, such as, "How long have you been living in this place?" Migrants consist of (a) persons born in the locality of enumeration who have resided in another locality at any time since birth; and (b) persons born outside the locality of enumeration. A non-migrant is a person who has lived in the locality of enumeration since birth. Alternatively, migrants have been classified in countries that have included the duration of residence question on their census questionnaires on the basis of the birthplace question. The question on the duration of residence has been included, in these cases, in order to aid in the classification of lifetime migrants into different duration cohorts.

The advantages of this question include the possibility to acquire information on return migration and the timing of the last move. The major shortcoming of this question is that it does not provide information on place of origin, thus impossible to infer about out-migration or differentiate in-migrants from immigrants.

(c) Place of previous residence

This question enables information to be acquired on the last moves of migrants. A migrant is a person whose last locality of residence is different from his/her locality of enumeration, his/her current residence. A non-migrant is a person who has lived in his/her current residence, the place of enumeration all his life.

The question is very similar to that on place of birth, with the major exception that it provides information on direct moves. Thus its main defect is that it is not time specific with reference to the move.

(d) Place of residence at a fixed prior date

According to this question, migration is distinguished by comparing a person's residence within two time periods, i.e., a person is regarded as a migrant if his/her locality of residence during the census or survey is different from his/her locality of residence at the specified past reference period, e.g., five years prior to the census or survey. The most important consideration in the design of this question is the choice of a suitable reference period, to minimise recall lapse and capture a reasonable amount of migratory movements. The advantage of a reference period of five years prior to the census/survey is that this facilitates the easy projection of sub-area population at 5-yearly intervals.

The question is quite clear about the time dimension of migration. But the collected information excludes persons born within the specified reference period. Moreover, from this data source, it is hard to make estimates of inter-censal migration.

Place of usual residence

The classification of migrants from a question on this item is based on distinguishing persons who are enumerated in localities different from their places of usual residence, i.e., "the geographical place where the enumerated person usually resides" (UN, 1980:65). To obtain such information in a census or survey, it is necessary that either the method of enumeration or listing of people is done on a de jure basis or a question on usual residence at the time of the census or survey is included.

Place where present at the time of the census

An alternative question, particularly for African countries that do not often have the resources to investigate both the questions on usual residence and place present at the time of the census, is to include only the latter question. As censuses in many African countries are based on a de facto enumeration, this concept is usually applied. The place where present at the time of the census in practice refers to the place where the person slept on the night preceding the census day or the date designated as census night.

CONCEPTS OF INTERNAL MIGRATION FOR SAMPLE SURVEY DATA COLLECTION PURPOSES

Unlike a census data collection exercise, sample surveys, especially specialised ones devoted to migration, offer the opportunity for detailed study of the various aspects of movements. Thus, in addition to the normal questions that are included in census questionnaires, new questions have been experimented with.

Definition of migration

Sample surveys provide the latitude for more careful definitions/classification of migration. For example, Caldwell (1968:41) has suggested the following classification scheme for migrants and non-migrants.

(a) Has never migrated to town
(b) Seasonal migrants
(c) Permanent returnee
(d) More permanent rural-urban migrant

Similarly, Roussel (1971) has proposed both a typology of migrants and the delineation of residence rules to distinguish the following groups: (a) Resident - having employment, use of land/or intention to establish residence for a period of one year or more; (b) Sojourners - consist of persons attending school or looking for job or absent for four months or more; (c) Visitors - comprise those who are gone from their usual residence for less than four months but not for work or schooling.

Specialized sample surveys in which more detailed questions can be accommodated are more able to address the issue of migration encompassing spatial movements such as rural-to-urban, permanent and short-term migrations as well as circulation.

The migration history

The migration histories questionnaire format has been used in other countries to capture various migratory movements within the life cycle of the migrants (Pryor, 1979). The questionnaire usually begins with an important life cycle event - for example, date of birth or entrance into the labour force - with respondents asked to show all places in which they have lived for a stated number of months or years (Pryor, 1979). Sometimes the migration history has been extended into a life history format.

The advantages and disadvantages of the migration history approach have been adequately discussed by Bilsborrow (1981.15-18) and Goldstein and Goldstein. While Goldstein and Goldstein (1979:38-41) emphasise the ability of the format to provide a more comprehensive coverage of migratory movements and linking these movements to the life cycle of the migrants, Bilsborrow cautions against its uncritical use because of problems of recall lapse of dating movements in the distant past.

Demeny's observation about the use of pregnancy histories in societies not familiar with chronological age or calendar is pertinent to the evaluation of the migration histories approach in African countries:

"Many people, particularly in largely illiterate populations, are unfamiliar with the calendar or the concept of chronological age, and are unable to recall past events correctly and to locate these events with some precision on a time scale. These facts make the collection of usable pregnancy histories not only costly but also are exceedingly difficult enterprise" (1973:631). For "pregnancy histories" substitute "migration histories" and the comment will still be valid.

In the French-speaking countries in the 1950s and 1960s when the sample survey method was the main data collection mechanism, migration history questionnaires were used in longitudinal surveys (Haeringer, 1977). Also recently in Egypt, a University of North Carolina team (Hawley and Dory, 1976) experimented with it. However, the accumulated experience has been very few for us to make any detailed appraisal as yet of the African experience in the use of migration histories.

A sample survey methodology suitable for internal migration studies especially those dealing with the consequences, selectivity and differentials of the movement, should employ a before-and-after technique. By this approach current information about the migrant and his origin are collected at the locality of origin. In a follow-up interview at the destination, current information will also be collected about the migrant and the locality of destination. This approach should minimise problems of recall lapse and ex post rationalization that are usually connected with retrospective questions administered to the migrant at the destination, about conditions and characteristics at the origin before departure (Findley, 1981:25-26). The African experience in this area is limited to enable an evaluation of this method (see: Roussel (1971)) and Haeringer (1968)).

AFRICAN USAGES OF CONCEPTS, DEFINITIONS AND CLASSIFICATIONS

Table 1 summarises the items on internal migration inquired into by selected African countries in their 1960 and 1970 rounds of population censuses and/or post-enumeration surveys. By far the most common question used to acquire information on migration was that on the place of birth. A smaller number of countries also used supplementary questions, mainly, that on duration of residence and place of previous residence in the past. Other questions that appeared on the census and/or post-enumeration survey questionnaires of African countries included reasons for change

Table 1 - Questionnaire items on internal migration enquired into by selected African countries in their 1960 and 1970 rounds of censuses (C) and Post Enumeration Surveys (PES)

Country	Birth-Place	Duration of Residence	Place of previous residence	Other
NORTH AFRICA				
Algeria (1977) C	X		Locality of residence 1966 and 1977	Place of residence [illegible] living in locality of enumeration
Egypt (1976) C	X	Duration of residence in the locality	Place of residence on 5 June 1967	Reasons for change of residence since June 1967
Libya (1973) C	X	X	X	
Morocco (1971) C	X		X	

Country	Birth place	Duration of residence	Place of previous residence	Other
Sudan (1973) C	X			Place of residence in 1969 and at the date of census
Tunisia (1975) C	X			
WEST AFRICA				
Gambia (1963) C	X			
(1973) C	X			
Ghana (1960) C	X			
(1960) PES	X	X	X	Place of enumeration
(1970) C	X			
(1971) SE	X	X	X	Place of enumeration
Ivory Coast (1975) C	X		X	
Liberia (1964) C	X			
(1974) C	X	X		
Mali (1976) C	X			
Nigeria (1963) C	X			
Senegal (1976) C	X		X	
Sierra Leone (1963) C	X			
(1974) C	X	X		
Togo (1970) C	X			
Upper Volta (1975) C	X			
(1976) PES				
CENTRAL AFRICA				
Cameroon (1976) C	X			
Central African Republic (1975) C	X			Date of migration to sous-prefecture
Congo (1974) C	X			
Gabon (1970) C	X			

Country	Birth-place	Duration of residence	Place of previous residence	Other
EAST AFRICA				
Botswana (1971) C				
Kenya (1969) C	X			
(1979) C	X		X	
Madagascar (1975) C	X			
Malawi (1966) C	X			
Mauritius (1972) C	X			
Mozambique (1970) C				
Seychelles (1971) C				
Somalia (1975) C	X			
Swaziland (1966) C	X	-residence time of 1967 census		
Tanzania (1967) C	X	-at birth of party, i.e., CKM (1977)		
(1977) C	X			
Uganda (1969) C	X	X		
Zambia (1969)	X			District of residence 21-months before census

Source: Various national census publications.

of residence since a specified period in the past place of residence at a specified period and at the date of the census, and where enumerated in the census about a year prior to the post-enumeration survey.

From a survey on national practices on the definition, collection, compilation and uses of internal migration statistics conducted by the United Nations Statistical Office in 1975 and in a follow-up survey, out of the 25 African countries that completed the questionnaire, all have used the place of birth question to collect information on internal migration in their censuses or surveys. Fourteen have used the concept, place of previous residence; ten, place of residence on a particular date in the past; fifteen, duration of residence; and nine reason for change of residence (UN, 1970).

Migration

In many African countries, for census purposes, for which a single question on place of birth is included, a migrant is usually defined as a person whose place of enumeration is different from his place of birth typically an administrative unit. When supplementary questions such as place of usual residence, duration of residence and place of previous residence are also included, a migrant has been defined as a person whose residence is not the same as the locality of enumeration for a time span less than his age; or who lived in years in a locality different from his place of residence at the time of the census or survey.

Some countries stipulate a minimum time span for a movement to qualify as migration. For example, in Nigeria "for a movement from one place to be called "migration", a migrant should have stayed continuously in his new area for at least 6 months before the reference date" (UNECA, 1979).

This same threshold value was adopted in a rural-urban migration survey conducted in Sierra Leone 1974/75. Here a person was considered a migrant if he has resided in an area "for longer than six months" (Byerlee et alia, 1975).

A shorter time span was employed in a study of Lagos: this study defined any person who had moved in or out of the sample area of Lagos for more than 31 days as a migrant (George and Ekpefoh, 1973).

In Botswana, while no time specific reference periods are stipulated, migrations are distinguished into three categories:

> Temporary migration is a movement of a person or persons from one place to another for a period of time, and then the moving away to another place or back to the original point of departure. Seasonal migration is that taking place annually and is caused by variations in the seasons which demand movement from one place to another. Permanent migration occurs when a person or group of persons leave their domicile and take up permanent residence in another domicile (UNECA, 1979).

Without the specification of definite time spans, how these various definitions of migrations are applied in censuses or surveys is not clear. Questions must arise, as for example, how permanent is permanent, i.e., six months, 1 or 5 years or the meaning of "a period of time".

Birthplace

Although questions on birthplace appeared on the census questionnaires of some former British colonies, these were not fully exploited for information on internal migration: "The questions on birthplace that were included in colonial censuses were treated as subordinate to questions on tribal affiliations as indicators of migration patterns and the data were not used in published tabulations, except to establish de jure populations for regions and to establish the total numbers born outside the region of enumeration and thereby to provide some indications of the extent of net migration" (Gould and Masser, 1975).

This applies to those areas of the country where enumeration of the population involved the completion of individual schedules, as opposed to an administrative type of count. The latter procedure was used to estimate, for example, the population of the Protectorate of Sierra Leone and thus for such areas no information on birthplace was available.

The birth place question has become one of the basic sources of internal migration information from censuses conducted since independence. The question was first included in the 1960 census of Ghana; subsequently several African countries, e.g., Sierra Leone (1963), Malawi (1966) and Tanzania (1967)) followed suit.

While the usage of the birth place question has become popular in many African countries, certain fundamental differences could be discerned in the methods of collection, analysis and tabulation of this item, as the table below shows.

Country	Date	Form of enumeration of birthplace question	No. of specified birthplaces	No. of birthplace by residence tabulation	Others
Ghana	1960	All	7 - towns or village	7	
Sierra Leone	1963	All	148	148	
Malawi	1966	All	24		
Tanzania	1967	All urban; 20% rural areas	19	67	
Uganda	1969	All urban; 10% rural areas	18	21	
Kenya	1969	All urban; 10% rural areas	41	8	
Zambia	1969	All	43	43	
Ghana	1970[1/]	All	9 - town or village	9	

Source: 1. Masser and W.T.S. Gould, Inter-regional Migration in Tropical Africa op.cit

1/ The birthplace data were tabulated by region of birth and region of enumeration in the main census and also by urban/rural in the PES (or supplementary enquiry in 1971).

Differences exist in the choice of the areal unit for the collection and/or tabulation of the data. In Ghana, for example, the relevant spatial units for tabulation in 1960 were the seven major administrative divisions of the country, though the collected information offered the opportunity for tabulations covering smaller areal units. In Sierra Leone, the data was collected and published for the smallest administrative units, the 148 chiefdoms. In the Eastern Africa countries of Tanzania, Kenya and Uganda, the birthplace question was not asked of all population groups. Rather, portions of the country, urban/rural, were selected for this question. Therefore, the tabulated information from these countries, covered only limited spatial units.

Another item of variation is in the definition of the concepts itself. The majority of countries define birthplace as the physical place of birth. However, a smaller number consider the birthplace as the usual place of residence of the mother of the respondent at the time of the latter's birth. For example, in Malawi, the two types of definitions have been used. Whereas, for the 1966 population census, the birthplace was defined as the physical place of birth, for the 1977 census, it was defined as the usual residence of the person's mother at the time of birth (UNECA, 1979).

Given the importance of rural-urban migration in many African countries, the birthplace data has sometimes been classified for the two sectors. For example in Sudan, the place of birth for the native population was classified into rural and urban as well as nomadic for census purposes.

Classification of the migration data into urban and rural origins and destinations is invaluable for studies on this topic. However, this classification scheme presents some problems, especially for censuses that employ an agglomeration rather than an administrative criterion for the definition of urban. If names of localities rather than the civil divisions are entered on the census form, the coding and processing of this item may be elaborated and time consuming. In any case, these have to be classified also under subgroupings such as the civil divisions which are used for the recording of the birthplace information. From such data it is difficult to classify the localities of origin into urban or rural. However, where the locality is stated, as in Ghana, it is possible to obtain the urban and rural classification in addition to that by civil division.

In Sierra Leone, for example, the reference unit for the birthplace question for both the 1963 and 1974 censuses were the 148 chiefdoms, the smallest administrative divisions. (The names of the localities were only entered when a person did not remember the name of the chiefdom.) From the information it proved difficult to classify origin places as urban or rural.

A similar problem occurred in Tanzania. Gleason and Speare in their study of in-migration to urban areas using the 1967 population census data, were unable to clearly distinguish rural from urban migration (Gleason and Speare, 1976).

A minor problem for the birth place question is accurately providing their names for members of the households who are absent at the time of the interview and about whom the respondent does not know much about, e.g., lodgers.

1/ The birth place data were tabulated by region of birth and region of enumeration in the main census and by urban/rural in the PES (or supplementary enquiry in 1971).

DURATION OF RESIDENCE

The question on duration of residence allows the distribution of migrants into different temporal categories. The African experience with the use of this question include problems encountered in relating "the question of definition of duration in respect of respondents whose residence has been interrupted by periods of absence on studies or temporary assignment elsewhere. In general most African countries adopted the rule that where an absence was for less than six months at a time it did not interrupt the duration of residence at any given time but where it was six months or more then this was regarded as interrupting the period of residence at the given place" (UNECA, 1977). Since this question also involves dating, the problem of recall lapse could compromise some answers, especially when the date of the duration of residence occurs sometime in the distant past.

PLACE OF PREVIOUS RESIDENCE

The question on place of previous residence has been asked in two ways in African countries. For the first type, the date of the previous census or survey is used as the reference point whereas for the other version of the question, the time reference for the previous residence is specified.

For example in Algeria, for their 1977 census, a question was asked about locality of residence at the time of the previous census in 1966. In Zambia the time reference was a year prior to the census: 'where were you living this time last year? In Tunisia for the 1975 census, a question was asked about previous place of residence in 1969, i.e., about six years prior to the 1975 census.

A CRITIQUE OF AFRICAN USAGES OF CONCEPTS, DEFINITIONS AND CLASSIFICATIONS

The past two decades or so have witnessed a tremendous growth of research on internal migration in Africa (for a review see Prothero, 1982 and Swindell, 1979) This development has been made possible by the growing amount of population censu and sample survey statistics on the movement. However, although these studies have broadened our understanding of major features of the movement, questions still remain about those aspects that are important to policy makers. These include, the determinants of migration, its social and economic impact on especially rural areas and the identification of the various types of movements such as short-term.

Commenting on this issue, the International Union for the Scientific Study o Population (IUSSP) Committee on Urbanization and Population Distribution in Africa observed that "Africa exemplifies the conclusion that the magnitude of the problems of internal migration and urbanization is not matched either by the quality and quantity of the existing data on these phenomena or by the analysis which so far have been undertaken".

Also Byerlee made a similar statement with respect to rural-urban migration: "Despite considerable research on African rural-urban migration, there is still an inadequate understanding of the rural-urban migration process and its implication for economic development" (Byerlee, 1974).

There are three main reasons for this situation. Firstly, a majority of African countries have relied overwhelmingly on population census cross-sectional statistics for most of their information on internal migration. This data system is often not the appropriate medium for the collection of data for the study of some of the more complex issues of the movement. Secondly, there have been few

recent national, specialized, as opposed to, localised sample surveys on migration in Africa. To be sure, in the fifties, in some French-speaking countries where the sample survey method was at the heart of the data collection system, migration information had been collected through multiround surveys (Gould, 1976). Also within the same period migration surveys consisting of interesting methodological aspects were undertaken in Nigeria and Ghana (Prothero, 1968). However, Caldwell's 1963 Ghana study, a model of a well planned and executed migration survey, is one of the few recent African surveys that comes near to being national in scope (Caldwell, 1969).

Thirdly, promising methodological innovations of migration data collection such as the uses of the migration history or sophisticated sampling techniques, have hardly been experimented with in Africa. Experience from other parts of the developing world where these have been used have shown that improvement occur in the richness and quality of data (Goldstein and Goldstein, 1981).

The choice of inappropriate spatial units is another methodological problem area of migration data collection in Africa that deserves attention. It is only in a few countries that reasonably small areas have been selected as the reference spatial units: "The fine designation of 140 chiefdoms as birthplace regions in Sierra Leone and of 'villages' in Ghana (1970) are exceptions. Elsewhere, for instance, in the nineteen regions used in Tanzania with a mean population of over 600,000, the areal units are very large and mask considerable variation in migration rates into and out of different countries" (Masser and Gould, 1975).

Also, even when smaller spatial units are the reference areas for the collection of the migration data, the published information have been made in terms of bigger units. For example, in Ghana (1970) respondents were asked to state the names of their village and region for the birthplace question. However, the published information was presented in terms of the nine administrative regions. It may be noted however that in both the 1960 PES and 1971 Supplementary the combined classification used was as follows:

(a) Born in same locality as of enumeration - non-migrants

  (i) urban
  (ii) rural

(b) Born in different locality but same region as of enumeration - migrants, short distance

  (i) urban
  (ii) rural

(c) Born in another region - migrants, long distance

  (i) urban
  (ii) rural

These classifications and the relevant tables are given in the Report of the 1960 Ghana Census (Census Office, 1971).

On the whole, however, given the importance of rural-urban migration, another important omission of the published census migration statistics in several countries is the classification of the data into urban and rural places of origin and destination.

There has been an uncritical use of concepts without a close examination of their relevance in the African context. A typical example is the definition of the concept "migration" itself. It is increasingly being argued that the definition of migration as involving a sustained stay in the place of destination results in the exclusion of several short-term movements: "... the concept of internal migration only faintly captures the full meaning of territorial mobility. Many movements involve the interchange of people between points of origin and destination, such as villages and towns, both individually and in small groups. All of the movements, however, have in common the characteristic that they begin and ultimately terminate in the same community and consequently involve no change in permanent place of residence" (Chapman, 1979). The volumes of short-term movements along with circulation and return migration, as studies that do record such movement have shown, are significant in many African countries to warrant more serious examination (Prothero, 1982).

Another problem area of migration data collection that requires more thorough investigation is the temporal criteria specifying movements as migrations. While "the period of time implied by the term permanent cannot be generalised in all instances of migration" (Managalam, 1966), there should be justification for selection of specific time periods - six months, one or five years. Moreover, the problem of recall lapse arising from the choice of a longer time span in African countries should be taken into account.

In this article, concepts, definitions and classifications which have been used in African censuses or surveys have been discussed. For other definitions and classifications, reference should be made to IUSSP (1982). As the African Household Survey Capability Programme developed, more in-depth modules on internal migration might be included which will require an extension of the concepts and classifications considered here.

SUMMARY AND CONCLUSIONS

There is increasing awareness recently that African migration research ought to seriously address itself to policy issues. The results of an inquiry into national practices show that data on internal migration are currently used in African countries mainly to study the movement of population from rural to urban areas and/or smaller to larger urban areas, analyse movements of population from economically depressed to prosperous areas and plan social and economic development. (For a fuller account, see "Uses of migration data" contained in this issue of Statistical Information Bulletin.)

Recently, other aspects of the movement argue for consideration. They include information on non-mobility and the economic situation of non-movers as compared to migrants; return migration; the complex interrelations between migration, fertility, mortality and urbanization; the delineation of other types of population mobility such as circulation; and examination of the consequences of the movement.

These areas of research call for new types of data which can best be provided by sample surveys supplemented by population censuses.

The population census has been one of the major sources of information on migration statistics in Africa within the last two decades. However, to enhance and enrich the published information from this source, African countries should, in addition to the birthplace question, endeavour to also include at least one of the following supplementary questions: duration of residence, place of previous residence and place of residence at a fixed prior date. Moreover, attempts should be made to exploit much more the data collected from this source than has been done in the past. For example, basic tabulations of migrants ought to be provided by age and sex, and where possible, cross-classified according to socio-economic variables such as education and economic status.

It is becoming increasingly realised that it is from sample surveys (supplementing census data) that most of the new data required for policy ought to come from. There had been within the last few years, several local migration surveys conducted in Africa, whose value for generalisation and thus policy has proved limited. There would certainly be an improvement in our understanding of migration, if in place of these, a few well designed national specialised surveys are instituted. Such surveys should make use of new data collection techniques such as the retrospective life history and sophisticated sampling techniques. Also, longitudinal surveys on migration are also required to advance our present knowledge about especially the various types of mobility and their seasonal character and about the consequences of the movement.

Simultaneously with the improvements in the data collection systems must be improvements in the concepts, definitions and classifications. This could best be achieved, if an integrated approach to data collection is followed in the country, i.e., concepts, definitions and classifications used for migration data collection in the census must be made comparable to those used for survey purposes.

This applies, for example, to the definition of migration as well as the spatial classifications used as the reference units for the collection of the data and the definitions of rural and urban. Relative to the reference spatial units used for the collection of the statistics, the minor rather than the major administrative units should in all cases be selected.

The use of supplementary questions has been the exception rather than the rule in several African censuses. It is an incontrovertible point that the birthplace question could provide much more information if other questions such as on duration of residence and place of residence at a fixed prior date are also included.

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ANNEX I

DEFINITIONS OF TOPICS: Extracts from principles and recommendations for population and housing census, op.cit

Place of usual residence

2.21 The place of usual residence is the geographical place where the enumerated person usually resides. This may be the same as, or different from the place where he or she was present at the time of the census or his or her legal residence.

Place where present at time of census

2.26 The place where present at the time of the census is, in theory, the geographical place at which each person was on the day of the census, whether or not this was his or her place of usual residence. In practice, the concept is generally applied to the place where the person slept on the night preceding the census day, because many persons appearing in the questionnaire are not physically present at the place of enumeration during most of the day.

Place of birth

2.30 The place of birth is, in the first instance, the country in which the person was born. It should be noted that the country of birth is not necessarily related to citizenship, which is a separate topic. For persons born in the country where the census is taken (natives), the concept of place of birth also includes the specified type of geographical unit of the country in which the mother of the individual resided at the time of the person's birth. In some countries, however, the place of birth of natives is defined as the geographical unit in which the birth actually took place. Each country should explain which definition it has used in the census.

2.36 It is recommended, therefore, that for the study of internal migration the data on place of birth be supplemented by the collection of information on duration of residence and place of previous residence or of information on residence at a specified date in the past.

Duration of residence

2.37 The duration of residence is the interval of time up to the date of the census, expressed in complete years, during which each person has lived in (a) the locality which is his or her usual residence at the time of the census and (b) the major or smaller civil division in which that locality is situated.

ANNEX I

Place of previous residence

2.40 The place of previous residence is the major or smaller civil division, or the foreign country, in which the individual resided immediately prior to migrating into his or her present civil division of usual residence.

Place of residence at a specified date in the past

2.42 The place of residence at a specified date in the past is the major or smaller civil division, or the foreign country, in which the individual resided at a specified date preceding the census. The reference date chosen should be the one most useful for national purposes. In most cases, this has been deemed to be one or five years preceding the census. The former reference date provides current statistics of migration during a single year; the latter may be more appropriate for collecting data for the analysis of international migration although perhaps less suitable for the analysis of current internal migration. Also to be taken into account in selecting the reference date should be the probablity of individuals to recall with accuracy their usual residence one or five years earlier than the census date. For countries conducting quinquennial censuses, the five years date can be readily tied, in, for most persons, with the time of the previous census. In other cases, one-year recall may be more likely than five-year recall. Some countries, however, may have to use a different time reference than either one or five years preceding the census because both of these intervals may present recall difficulties. National circumstances may make it necessary for the time reference to be one that can be associated with the occurrence of an important event that most people will remember.

ANNEX II

MIGRATION AND RESIDENTIAL STATISTICS: AFRICAN RECOMMENDATIONS FOR THE 1980 ROUND OF CENSUSES

Recommended and other useful topics

Topics that appear on the questionnaire

* Place of usual residence; and/or
* Place where present at the time of the census
* Place of birth
* Duration of residence
  Place of previous residence
  Place of residence at a specified date in the past

Derived topics

* Total population
* Locality
* Urban and rural

Other useful topics on geographical and migration characteristics*

- Location of place of work
- Location of school, university, etc.
- Journey to work
- Place of civil registration
- Year or period of arrival in country to take up residence

Tabulation to be prepared

- Total population and population of major and minor civil divisions, by urban/rural distribution and sex
- Population in localities by size - class of locality and sex
- Population of principal localities and of their urban agglomeration, by sex
- Native and foreign-born population by age and sex
- Native population by major civil division of birth, age and sex
- Foreign-born population by country of birth, age and sex
- Population by duration of residence in locality and major civil division, age and sex
- Population ... years of age and over by place of usual residence, place of residence, duration of residence, place of previous residence and sex
- Reasons for migration
- Metropolitan and similar areas

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* Priority topics recommended for the African region

* Mentioned in the recommendations of at least one region.

CONCEPTS, DEFINITIONS ET CLASSIFICATIONS EN VUE DES STATISTIQUES DE MIGRATIONS INTERNES EN AFRIQUE

RESUME

Le présent chapitre porte sur les concepts, définitions et classifications utilisés dans les recensements et les enquêtes par sondage pour la collecte de statistiques de migrations internes en Afrique. On y évalue également les quatres questions principales employées pour le rassemblement de statistiques de migrations, à savoir : a) le lieu de naissance; b) la durée de résidence, c) le lieu de résidence antérieur et d) le lieu de résidence à une date déterminée du passé, tout comme d'autres concepts utilisés dans les enquêtes par sondage, tels que les définitions de la migration. Les utilisations antérieures des concepts susmentionnés dans les pays africains ont été examinées d'un oeil critique.

Cette étude souligne que les recensements de la population étaient devenus l'une des sources principales d'information sur les statistiques migratoires en Afrique au cours des deux dernières décennies. Toutefois, afin de renforcer et d'enrichir les renseignements obtenus de cette source, les pays africains devraient outre la question sur le lieu de naissance, s'efforcer d'inclure au moins une des questions supplémentaires suivantes: durée de résidence, lieu de la résidence antérieur et lieu de résidence à une date déterminée du passé. Par ailleurs, il faudrait, s'employer à exploiter les données provenant de cette source beaucoup plus que par le passé. Par exemple, les tableaux de base sur les migrants devraient être fournis par âge et par sexe et il faudrait, dans la mesure du possible, en établir des classifications croisées selon des variables socio-économiques comme le niveau d'instruction et la situation économique. Il est de plus en plus admis que c'est à partir des enquêtes par sondage (qui complètent les données de recensement) qu'on devrait tirer la plupart des données nouvelles nécessaires dans le domaine des politiques. Plusieurs enquêtes locales sur la migration avaient été effectuées ces dernières années en Afrique, mais leur utilité à des fins de généralisation et d'élaboration de politiques s'est avérée limitée. Nos connaissances sur la migration s'amélioreraient certainement si au lieu de ces enquêtes locales, étaient adoptées des enquêtes nationales spécialisées et bien conçues. De telles enquêtes devraient employer les nouvelles méthodes de collecte de données, tels l'historique de vie rétrospectif et les méthodes de sondage perfectionnées. En outre, les enquêtes longitudinales sur la migration sont aussi nécessaires pour faire progresser nos connaissances actuelles concernant en particulier les divers types de mobilité et leur caractère dans le temps ainsi que les conséquences de ces mouvements.

Parallèlement à ces améliorations des systèmes de collecte de données, il faut des progrès dans les domaines des concepts, définitions et classifications. Le meilleur moyen de parvenir à cela est l'adoption dans le pays, d'une méthode intégrée de collecte de données, autrement dit il faut que les concepts, définitions et classifications utilisés pour la collecte des statistiques de migrations dans le recensement soient comparables à ceux employés pour les enquêtes.

Cette condition s'applique par exemple à la définition de la migration ainsi qu'aux classifications spatiales servant d'unités de référence pour le rassemblement des données et les définitions des zones rurales et urbaines. Pour ce qui est des unités de référence spatiale utilisées pour le rassemblement de statistiques, il faudrait dans tous les cas choisir les petites unités administratives et non les grandes.

L'emploi de questions supplémentaires a été l'exception plutôt que la règle dans plusieurs recensements africains. Il est indiscutable que la question sur le lieu de naissance pourrait fournir bien plus de renseignements avec l'inclusion d'autres questions comme celles portant par exemple sur la durée de résidence et le lieu de résidence à une date déterminée du passé.

METHODS OF MEASURING INTERNAL MIGRATION

INTRODUCTION

Migration has been defined as spatial or geographic mobility involving a change of residence between clearly defined geographic/administrative areas. The above definition clearly has time and distance implications. The duration of stay at any destination may vary from a few hours to several years and any move made may vary from a few metres or yards to several kilometres or miles. The types of moves, however, which are usually of interest in migration studies are those that involve a sustained or permanent stay in the place of destination. Often an arbitrary period such as six months is selected as the cut off point to distinguish a migratory move from a non-migratory one. It must be pointed out though that a move of less than six months at the time of an enquiry, may be considered migratory when the move is intended to be permanent. A related aspect of the time dimension in migration is the period of time in which the move took place. This aspect is referred to as the migration interval. The interval may be fixed such as one year, five years and the intercensal period or it may be variable such as the period since birth and the period since last move. Information on fixed or definite interval moves are used to measure fixed-term or period migration while information on variable-period moves are used to measure life-time migration.

With respect to the distance dimension a migratory move is considered to involve a change in the geographic or socio-economic environment. Operationally, however, only moves which involve a crossing of a geographic, political or administrative boundary qualify as migratory moves. In migration studies, two broad types of migration are distinguished, namely, international migration and internal migration. International migration refers to movements across international boundaries while internal migration is restricted to migratory movements within a country.

In the study of internal migration, several types of migratory moves are distinguished. These are: rural to urban migration; rural to rural migration; urban to rural migration; urban to urban migration and inter-regional migration i.e. movements between administrative/political sub-divisions of a country without rural/urban classification of the place of origin and destination.

Migration is one of the components of population growth and as such it has been of interest to social scientists in general and demographers in particular though it has not received attention to the same extent as fertility and mortality. However, of the two types of migration, much of the earlier studies focused on international migration though internal migration has been receiving increasing attention in recent times. A review of the literature shows that the demographer's interests in the study of internal migration have included the following: measures of internal migration as elements in making current population estimates and population projections at the sub-national level; internal migration as a factor in a country's population distribution; and the role of internal migration in socio-economic change and differentiation.

In this paper an attempt will be made to review the sources of data on internal migration and to discuss the methods which have been developed to measure internal migration in the attempt by social scientists to study the various aspects of the phenomenon.

PRINCIPAL SOURCES OF DATA AND STATISTICS

The principal sources of data on internal migration in most countries which publish statistics on the topic are population censuses and demographic sample surveys. Other sources are continuous population registers and to a still lesser extent, some administrative records.

As indicated above, population censuses and demographic sample surveys constitute the most common source of data on internal migration and they are the potential sources for the majority of countries. The internal migration data from censuses and surveys are of two types, namely, data obtained through direct questions on migration or migration related topics and data derived indirectly from census questions not necessarily collected for the purposes of measuring internal migration. Responses to migration related questions are used to classify the population of a given area into migrants and non-migrants

The second type of information on internal mgiration obtainable from censuses consists of net internal migration estimates derived from a comparison of total population counts or population by age and sex for component areas in two censuses. The difference between the population counts in two censuses gives a measure of the total population change in an area and when the total change is not due to natural increase alone then, the difference is attributable to net migration. This difference, however, consists of both net international and internal migrations unless the international migration component can be assumed to be negligible in the area concerned or that the area has a closed population. Comparison of total population change and natural growth rate to obtain net migration rates are commonly referred to as estimates by the residual method. The method will be discussed in some detail in later sections of this paper.

Another source of information on internal migration is a continuous population register. Such a register requires among other things that a person who moves should transfer his/her record including residential address from one local registry office to another. The information regarding such changes of residence can be used to compile internal migration statistics.

Other potential sources of internal migration statistics include administrative records such as records of national social security systems, registers of voters, and partial population registers. The citizens registration systems of Zambia and Zimbabwe are examples of partial population registers which could be developed to obtain statistics on internal migration.

A full account of the sources of internal migration data is given in the paper on concepts, classifications and definitions included in this bulletin.

INTERNAL MIGRATION MEASUREMENT

As indicated in the preceding brief discussion on sources of data, internal migration information may be obtained through responses to direct migration questions in censuses and surveys or indirectly through the analysis of aspects of population data of component areas at successive censuses. The methods used in measuring internal migration are therefore classified into two main types and they are referred to as the direct and indirect methods of measuring internal migration.

DIRECT METHODS OF ESTIMATION

The direct measures of internal migration are based on data from the following census topics: place of births, duration of residence, by place of last previous residence and place of residence at a fixed prior date.

PLACE OF BIRTH

Census questions on place of birth have a direct bearing on migration. The usual question is of the form "Where were you born?" Enumerators are then instructed to record the country of birth of the foreign-born and the geographic/administrative subdivision of birth of the native born i.e. persons born in the country. The number of migrants is then obtained through a count of the persons who were enumerated in a place different from the place where they were born. Migration streams of the internal migrant category can then be obtained on the basis of specific birth places and specific places of residence at the time of the census count. Usually the absolute figures of the interregional migration streams are obtained through statistical tables showing across-classification of region of birth by region of enumeration. If the place of birth and the place of residence are further classified as rural or urban then rural-urban migration can also be estimated.

The internal migrant population obtained through place of birth statistics are referred to as life-time in and out-migrants. The sum of life-time in-migrants or life-time out-migrants gives the total number of life-time migrants for the country; and the sum of net life-time migration gains or losses is a measure of population redistribution due to life-time migration for the country as whole.

The availability of birth place statistics for the same set of areal units at two consecutive censuses also permit the estimation of period or intercensal net migration for each unit. The estimate is given by the difference between net life-time migrations at the two censuses after due consideration is given to the probability of life-time in- and out-migrants at the first census surviving during the intercensal period.

The estimate is given by the following formula:

$$\text{NET } M = (I_{t+n} - O_{t+n}) - (S_i I_t - S_o O_t)$$

Where I_t and I_{t+n} = Life-time in-migrants at two censuses at time 't' and 't+n' respectively

O_t and O_{t+n} = Life-time out-migrants at times 't' and 't + n' respectively

S_i and S_o = intercensal survival ratios of life-time in- and out-migrants respectively

The above formula provides the proportion of life-time in- and out-migrants at the first census that will survive the intercensal period. The use of birth place statistics at two censuses together with intercensal survival ratios thus permit the splitting of net intercensal migration estimate into net migration of in-migrants and net migration of out-migrants in a particular area during an intercensal period.

The improvemsnt in the intercensal or period migration estimation through the use of survival ratios is facilitated if place of birth statistics are tabulated by age for all the areal units of birth and residence separately and at both censuses. If, however, age distribution of persons born outside the area are not available then a way out of the difficulty is to use over-all census survival ratio or over-all life-table survival ratio in the calculation but in this case the accuracy of the estimate may be affected.

One of the major problems with regards to migration estimation from birth place statistics is related to the definition of migrant. The birth place definition of migrants assumes a single movement directly from the area of birth to the area of enumeration. Such definition ignores any intervening stops. Further, all persons enumerated in their birth places are considered as non-migrants in the birth place procedure for migration estimation even though some may be return migrants. The above problems make it necessary that measures of life-time migration from birth place statistics be supplemented by other measures for a proper estimation of the volume and direction of internal migration.

DURATION OF RESIDENCE BY PLACE OF LAST PREVIOUS RESIDENCE

Measurement of migration may also be approached through the analysis of responses to census question on the length of stay in the place of residence. The question may be of the form:"How long have you been living in this locality?" The duration of residence approach to migration measurement identifies both persons born outside the area of enumeration and those born in the area but had at one time lived outside the area as migrants. Thus, migrants in this case include all life-time migrants as in the birth place approach as well as return migrants. It therefore fills one of the gaps in the birth place approach to migration measurement.

However, the significant contribution of duration of residence approach, apart from the provision of data regarding return migrants, is that it can provide information on the timing of last moves of life-time in-migrants and thus can permit classification by migration cohorts. Its drawback is that information from duration of residence statistics alone does not give indication of the place of origin of in-migrants to an area hence it cannot provide information on out-migration or net-migration. Neither can international migration be distinguished from internal migration. Thus, duration of residence statistics alone do not provide useful data for the measurement of internal migration unless international migration can be assumed to be negligible or the area's population is closed to external migration. If there is significant international migration then duration of residence will need to be cross-classified by place of birth and/or place of last previous residence to permit the measurement of internal migration.

Cross-classification of duration of residence by place of birth allows the study of spatial origin as well as the study of timing of moves of life-time migrants and the effect of the variation of one on the other.

On the other hand, when duration of residence is cross-classified by place of last previous residence, migration cohorts and migration streams can be identified and period migration can thus be measured. Statistical tables showing such cross-classification therefore provide much more useful information than data derived from only responses to place of last previous residence or duration of residence alone. It must however be stressed that while data on duration of residence alone cannot be used to measure internal migration, data on place of last previous residence cross-classified by place of present residence provide migration measures which reflect direct movement between places unlike the place of birth approach which provides similar measures but ignores intervening moves between departure from first residence and arrival at the last residence.

PLACE OF RESIDENCE AT A FIXED PRIOR DATE

Responses to census or survey question regarding residence on a specified past date provide information on fixed period migration. The item is regarded as the best single item on migration since the migration interval is clearly stated and the item provides a count of surviving migrants over a definite period of time. In this approach, a migrant is defined as a person whose residence at the census date differs from his residence at a specified past date. This definition excludes from the count of migrants, persons who moved out of an area during the interval between the two dates but returned to the area before the end of the interval.

Tabulations showing cross-classification of place of enumeration by place of residence at a specified date in the past for each geographic/ administrative division of a country permit the calculation of in-, out- and net migration. Other measures of internal migration can also be derived from the absolute figures.

INDIRECT METHODS OF ESTIMATION

Unlike the direct methods of measurement described in the preceding sections which are based on responses to direct questions on migration in censuses and surveys, there are other methods which may be used to compute estimates of net internal migration whether direct migration questions have been investigated in a census/survey or not. The methods which are not based on direct migration questions are commonly called the indirect methods of net internal migration. However, like the direct methods, the principal source of information for the estimation is the population census and the particular census data used are the population totals of a country's geographic/administrative sub-divisions and their distribution by sex and age. Depending on the particular approach adopted for the calculation, the census population counts may be supplemented with information from vital registration sytems and life tables where available.

The indirect methods of internal migration estimation have been classified into two broad type by Shryock, Siegel and Associates in the methods and Materials of Demography as: (a) National Growth Rate Method and (b) Residual Method comprising the Vital Statistics method and the Survival ratio method.

The underlying principle of the indirect methods of internal migration estimation is the fact that population increment between any two dates for any geographic area is the result of natural increase and net migration. If, therefore, a country's population is closed to international migration and the rate of natural increase is known then the difference between the population count at a census and the expected population total from natural increase alone is attributable to net internal migration. It is the approach adopted in the calculation of the expected population which distinguishes the various variants of the indirect methods.

NATIONAL GROWTH RATE METHOD

This method gives a very crude measure of net migration but it may be used to give a quick and rough indication of the extent of net migration in the absence of adequate information for the calculation of more defined measures. In this method comparison is made between the rate of growth of a geographic sub-division of a country and the total national growth rate. If the growth rate of the geographic sub-division is greater than the national average then the area may be described as experiencing net in-migration, and a rate less than the national average is interpreted as net out-migration. The underlying assumption of this method is that the rates of natural increase and of net immigration from abroad are the same for all parts of the country.

The estimate of migration rate by this method is given by the formula"

$$m_i = \frac{P'_i - P^o_i}{P^o_i} - \frac{P'_t - P^o_t}{P^o_t} \quad K \quad \underline{1/}$$

Where

m_i = migration rate for area i

P^o_i = population of geographic sub-division i at the beginning of intercensal period

P^i_c = population of geographic sub-division i at the end of intercensal period

P^o_t = national population at the beginning of intercensal period

P^i_t = national population at the end of intercensal period

K = a constant such as 100 or 1,000

For a variant of the national growth rate method, the rate of growth of a given geographic sub-division is compared with the national natural growth rate instead of the total growth rate. A geographic sub-division growth rate greater than the national growth rate is interpreted as net in-migration for the area, and a rate less than the national average interpreted as net out-migration. Here the assumption is that, like the first variant, natural increase is the same throughout the country and net international migration is negligible. If, however, net immigration is not negligible then the volume may be obtained by subtracting national natural increase from national total increase.

It must be stressed that both variants of the national growth rate method are supposed to give only rough and ready indication of the extent of net internal migration provided the underlying assumptions hold.

RESIDUAL METHODS

The residual methods are of two principal varieties. These are: vital statistics method and the survival ratio method. The vital statistics method is simpler conceptually but it is not feasible in most African countries since most of the African countries do not have complete and reliable vital registration systems.

1/ Shryock H.S., Siegel J.S., and Associates : The Methods and Materials of Demography

VITAL STATISTICS METHOD

This method makes use of the 'balancing equation' to estimate net migration and the data required for the calculation are reliable (complete) statistics of births and deaths to residents of the sub-divisions of a country. The births and deaths statistics are used to estimate the natural increase of the population of a given sub-division of a country between any two dates such as two census dates. The estimate of net migration is then obtained by subtracting the natural increase from the total population change. The estimate is given by th following equation.

$$NET\ M = (P' - P^0) - (B - D)$$

Where

NET M = Net migration

P^0 = Population of the area at the beginning of the period

P' = Population of the area at the end of the period

B = Births to residents of the area during the period

D = Deaths to residents of the area during the period.

The net migration estimate obtained by the above equation, however, represents both international migration and internal migration unless, as in the national growth rate method, international migration is negligible or the area can be assumed to be closed to international migration. If such assumption does not hold then a way to separate internal migrat on from international migration in the estimation procedure is to base the calculation on the native population i.e. population born in the country. Even with this refinement the implicit assumption is that the native population itself has not experienced external migration. Also, the refinement can only be made if both the census data and the deaths statistics are available separately for the native born and the foreign-born for each component area of the country. It must be pointed out though, that the refinement i.e. the use of the native-born population in the computation provides only partial estimates of net internal migration since the internal migration of the foreign-born who were already in the country at the beginning of the interval will be excluded. A farther refinement can only be made through the use of data on place of last residence. Such data, however, will require a direct migration question in a census or a survey.

The vital statistics method of internal migration estimation can be used to estimate net migration not only of the total population of a given geographic sub-division of a country but also segments of that population defined by characteristics which are invariant over time such as sex and ethnicity, or by characteristics for which the change over time is determinable such as age.

One of the major problems encountered in the use of the vital statistics method for net migration estimation is related to changes in area boundaries of geographic/administrative subdivisions between census dates. Unless, in situations of changes in area boundaries, the necessary adjustments can be made to obtain data for a constant spatial area, estimates made will reflect the change in area as well as net migration. Further, since in most of the countries of the African region vital statistics are generally of poor quality, the errors of the vital statistics will be reflected in the migration estimates when the estimates are obtained by the vital statistics method. The estimates of net migration by the vital statistics method represent a residual obtained by subtraction hence relatively moderate errors in population counts or in vital statistics produce much large errors in the migration estimates. A redeeming feature, however is that the errors are sometimes offsetting i.e. they may cancel out.

SURVIVAL RATIO METHODS

The other varieties of the residual methods for the estimation of net internal migration for an intercensal period involves the use of estimates of the probability of survival. The data needed for the calculation are population distribution by age and sex for each geographic subdivision of a country at two successive censuses and a set of survival ratios applicable to the population at the first census. If international migration is suspected to be significant then a distribution of the population by country of birth will also be required. The survival ratios are applied to the population at the first census to obtain the estimate of the expected number of survivors from the first census to the second. The difference between the population count at the second census and the expected number of survivors from the first census is considered to be the estimate of net migration.

The estimate of net migration by the above method is given by the equation"

$$\text{NET } M'(x) = P_{x+n,\, t+n} - S_x P_{x,t} \quad \underline{1}/$$

Where

$M'(x)$ is net migration of survivors among persons aged x at the first census in a given area

$P_{x,t}$ is the population aged x in that area at the first census

$P_{x+n,\, t+n}$ is the population aged x + n in the same area at the second census n years from the first

S_x is the survival ratio

1/ United Nations, Methods of Measuring Internal Migration.

The use of the above equation is often referred to as the forward survival ratio variant of the survival ratio method and it yields estimated net migration of survivors from the first of two censuses.

An alternative procedure to the use of forward survival ratios is the reverse survival ratio method where the reciprocals of the forward survival ratios are applied to the population count x + n years at the second census 'n' years from the first to obtain the expected population that would have been x years of age at the first census. The estimate of net migration by this alternative method includes deaths to the migrant cohorts with the unrealistic assumption that all the migration occurred at the beginning of the interval.

Improvement to estimates obtained through both the forward and reverse survival ratio methods could be effected by the average of the two estimates. This average implies a more meaningful assumption that "deaths and migrations were evenly distributed over the intercensal period or that all migration occurred at the middle of the interval" 1/.

The estimate of net migration obtained by the survival ratio method, however, is a combination of net international migration and net internal migration and like the vital statistics method described earlier, the measure of net internal migration could be obtained only when the method is applied to a population with negligible external migration.

As indicated earlier, the data for the estimation of net migration by the survival ratio method are population statistics at two dates and a set of survival ratios. The population figures are obtained wholly from census counts but the set of survival ratios may be calculated from a life table or from the age and sex distribution of the relevant population of a given area at two successive censuses. The source of the survival ratios are therefore used to classify the method into two types: life table survival ratio method and census survival ratio method.

LIFE TABLE SURVIVAL RATIO METHOD

This method may be used when appropriate life table depicting the mortality conditions of the intercensal period for the area in question are available. If, however, a life table for the area is not available but the mortality situation of the area is approximately known then a model life table may be used to calculate the survival ratios.

It must be pointed out though that if the life table survival ratios are not compatible with the age structure of the area as a result of irregular age distribution of the area then some form of smoothing of the age distribution will be necessary, otherwise the resultant estimate of net migration will be distorted.

1/ United Nations, Methods of Measuring Internal Migration.

CENSUS SURVIVAL RATIO METHOD

Where a life table is not available or cannot be used for other reasons, census age distribution may be used to compute the survival ratios. The census survival ratio is defined as the "ratio of the population aged x + n at a given census to the population aged x at the census 'n' years earlier" 1/. The census survival ratio method, however, cannot be used to obtain estimates of net migration for persons born during the intercensal period. The gap may be filled through the use of births statistics, if available, or area-specific child-woman ratios derived from the second of two censuses.

The distinguishing feature about the census survival ratio method is that unlike the life table survival ratio method it tends to correct for systematic errors in the age data and thus compensates for some of the effects due to errors in the age structure. The net migration balances of all areal units is therefore always zero when the census survival ratio method is used for the estimation. However, there are a number of basic assumptions implicit in the method which should hold reasonably well for the country and the period concerned to assure an accurate estimate of net internal migration. These are:(a) that the national population is closed to external migration; (b) that the true mortality rates are the same for each geographic sub-division as for the nation, and (c) that the pattern of relative errors in the census age data is the same for the same cohort in both censuses.

MEASURES OF INTERNAL MIGRATION

The methods for measuring internal migration discussed in the preceding sections are used to derive the number of in- and out-migrants as well as estimates of in-, out- and net-migration of the various geographic/administrative sub-divisions of a country. Also census and survey cross-tabulations may be used to reveal the timing and direction of internal migration. The direct methods provide estimates of in-, out- and net migration whereas the indirect methods yield only estimates of net-migration.

In the study of population dynamics including migration, however, the demographer's interest goes beyond the estimation of the absolute numbers of events. Usually, an answer is sought to the question "what is the incidence of this event?" Thus in the measurement of internal migration the number of migrants or the number of migrations obtained through any of the methods described in the preceding sections, is related to the appropriate population to obtain the relative frequency with which the event of migration occurs. The resultant rate is usually a probability number. Various migration rates, ratios or indices can be

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1/ United Nations, Methods of Measuring Internal Migration.

calculated depending on the aspect of internal migration being studied and the type of data available.

In general, therefore, an internal migration rate is the number of internal migratory events divided by the population exposed to the possibility of internal migration. As indicated earlier, the various methods already discussed yield the number of the migratory events. The next problem in the calculation of a rate is then the selection of the appropriate base. When the migration interval is short the various alternative bases may yield insignificant differences hence the most convenient base in terms of data readily available is selected. Otherwise careful consideration needs to be given to the base selection to ensure that the resultant rate will adequately describe the aspect of internal migration being studied.

The internal migration rates that are usually computed are rates of in-migration, out-migration and net-migration for the various geographic/administrative sub-divisions of a country. Theoretically, a probability rate of out-migrants would relate out-migrants to the population at the place of origin while the related in-migration rate would relate the in-migrants to the population of the rest of the country. In the case of net-migration, the population of the entire country would be the population at risk and therefore the logical base to use.

In practice, however, the population of a given area is used as the base for the calculation of in-, out- and net-migration rates for the area. Three approaches are advocated in the determination of the area to be used as base. In one approach, the population base for in-migration rate includes in-migrants of the area concerned but excludes out-migrants; the base for out-migration rate includes out-migrants but excludes in-migrants; and the base for net-migration rate is the average of the bases for in- and out-migration rates. In the second approach, the base used in the calculation of net-migration in the first approach, i.e. the average of the bases of in- and out- migration rates, is used for all three rates. In the third approach, all the three rates (in-migration, out-migration and net-migration) are based on the non-migrant population.

The third approach to the selection of a population base described above provides a measure of the impact of migration on the non-migrant population of an area and it seems the least biased in favour of either net in-migration or net out-migration. The use of the third approach, however, is feasible only in the case of the direct methods of internal migration estimation. When the indirect methods are used to estimate net migration, the usual base used in calculating the rate is the population that is not weighted in favour of in-migration nor out-migration. In the vital statistics method, the population at the mid-point of the migration interval is used as the base. This population contains half of migrants and their deaths plus non-migrants and their deaths. For the census survival ratio method the base is the non-migrants plus half of both in-migrants and out-migrants.

MESURES DE LA MIGRATION INTERNE

RESUME

Ce chapitre est une description des deux types de méthodes permettant de mesurer la migration: les méthodes directes et les méthodes indirectes.

Les mesures directes de la migration reposent sur les réponses aux questions, telles que le lieu de naissance, la durée de résidence, le lieu de la résidence antérieur et le lieu de résidence à une date déterminée du passé, questions figurant dans un recensement de la population ou une enquête par sondage. C'est ainsi qu'à partir des données sur le lieu de naissance recueillies lors de deux recensements consécutifs de la même zone, il est possible d'estimer les taux de migration nette intercensitaire. De même, les classifications de renseignements sur la durée de résidence et le lieu de naissance permettent de calculer les taux de migration totale des différentes cohortes.

Les résultats des estimations de la migration à partir des méthodes indirectes reposent sur des hypothèses, par exemple en ce qui concerne les taux d'accroissement de la population. Les deux types de méthodes indirectes sont la méthode du taux d'accroissement naturel et la méthode résiduelle. Ces deux méthodes sont décrites et évaluées dans le chapitre.

THE USE OF ADMINISTRATIVE AND OTHER RECORDS FOR THE ANALYSIS OF INTERNAL MIGRATION

TYPES OF RECORDS

There are five main types of administrative records which are of potential use in the analysis of internal migration in Africa. These are: population registers, electoral rolls, school records, labour or employment records and social security records. In addition, one can also consider parish registers or church records in which the movement of church members (transfers and arrivals) are recorded. Parish registers are not administrative records since they are not maintained by central or local government. In this connexion, it should be noted that there is strict separation of church and state in all African countries. However, parish registers are considered briefly in this paper since the structure is similar to those of administrative records.

None of these records have been developed to the stage, as in some Western European countries and the Communist countries of Eastern Europe and Asia where they can be used as a source of migration data. However the potential exists and this will be examined in greater detail in the remaining sections of this paper.

POPULATION REGISTERS

The main function of a population register is administrative. It provides legal identification for the individual and as such usually records his movements from one civil subdivision to another. The subdivision may be a locality or a county (or canton), depending on the administrative set-up of the country.

In most of the countries where the system of population registers exists, the starting point is the exhausitve enumeration of the population, i.e. a population census. This is followed by a continuous updating of the information collected. Births and in-migrants are recorded, and deaths, and out-migrants lead to deletions. In addition, changes in personal characteristics such as marital status, address of residence and occupation are recorded. Thus, although the primary aim of population registers, is administrative, the information collected can be used for statistical purposes.

It is worthwhile recalling that the United Nations (United Nations, 1962) defined a proper continuous population register as "a mechanism which will provide for the continuous recording of information about the population in such a manner that data on particular events that occur to each individual, as well as selected characteristics describing him, are maintained on a current basis". As already stated a number of developed countries have systems which satisfy this definitions. These countries include Denmark, Netherlands, Norway, Japan and Sweden.

It has been argued that when the system of continuous population registration becomes perfect in a country, the need for exhaustive population censuses will disappear. However that time seems to be far off and so far only one country has considered cancelling its population census as being no longer necessary. The situation is however very different in Africa.

A full discussion of the uses of continuous registers in Migration Analysis is given in Annex I of UN Manual VI (United Nations, 1970)

As implied in the first section of this paper, there are no population registers in Africa which have so far been identified in the literature as being used for the analysis of internal migration. However, a number of countries either maintain or are in the process of compiling such a register. Ethiopia, Tanzania and Zimbabwe are examples of such countries.

In Ethiopia, the Urban Dwellers' Association (UDA) or Kebele as they are sometimes called and the Peasant Association (PA) maintain registers of all their members. To understand the system, it is necessary to have an idea of the administrative structure of the country.

Ethiopia is divided into 14 Kifle Hagers (regions) which are in turn sub-divided into 102 Awraja's (provinces) and 510 Weredas (districts) (UNFPA, 1980). Excluding the urban and nomadic areas, each wereda is made up of a number of Peasant Association Areas (PAA's). On the average there are 60-70 PAA's making up one Wereda. Deviations from this average are common and are reflected in the fact that there are only 6 PAA's in the Fentale Wereda near Awash National Park while there are 128 PAA's in Ambo Akababi Wereda in Western Shewa.

So far not all areas of the country have been covered. It is claimed however that more than 90 per cent of the country is covered. Unlike the take-off point for registers in the developed countries, the Ethiopian system did not start with a national population census. Instead there was an exhaustive enumeration within each PA or UDA area. The enumeration was not carried out simultaneously in all areas. Thus the possibility of ommissions and duplications cannot be ruled out. However, the Ethiopian authorities do not think that the incidence of such errors was great enough to vitiate the usefulness of the registers. It has also to be noted that the proper machinery does not yet exist for the continuous updating of the registers but the Kebele or PAA registers provide a potential source of internal migration data. In this connexion, it should be noted that a person cannot move from one Kebele or Peasant Association Area (PAA) to another Kebele or PAA without proper authority. Such movements are also expected to be recorded by both the sending and receiving units.

Another country where the existing "registration" system has the necessary potential for use in migration analysis, as already stated, is Tanzania. Tanzania's administrative structure is based on the 10-cell system. It may be noted that Tanzania is divided into 25 regions- 20 on the mainland and 5 on Zanzibar. Each region is divided into districts. There are 86 such districts. Each district is divided into wards and the wards are in turn divided into cells, each cell consisting of 10 families, thus resulting in the structure referred to as the 10-cell system (UNFPA, 1979).

Here again with few modifications in the recording system, it will be possible for the register to provide information on births, deaths, characteristics of persons and in and out-migrants. Such information could be used for the analysis of internal migration. The problem in both case countries is the high level of illiteracy.

Ethiopia has mounted a massive literacy campaign and it should be possible to have many literates at each PAA level within a few years. The position of Tanzania is less favourable in terms of efforts to overcome illiteracy. In both cases, however, no proper continuous population registration system can be set up and maintained until a high level of literacy is attained especially in the rural population.

It is clear from the preceding paragraphs that the process of establishing a population register is not a simple one. The initial effort is similar to the one exerted in conducting population censuses. However, as soon as the base register has been established, it should be continuously updated. The cost of doing this is usually prohibitive and in terms of cost/benefits the population register does not yet qualify to be given high priority in African countries. It should be noted that Ghana's experience with partial registration and issue of identity cards to all persons aged 15 years and over was a costly failure. However, where the administrative structure requires such registers to be maintained, for example in Ethiopia and Tanzania, the statistician should take the opportunity to influence the design and content of the register so that it can be used for statistical purposes, including the provision of adequate and reliable information on internal migration.

As stated in Annex I of UN Manual VI (United Nations, 1970), "registers are concerned with the event of migration. It follows, therefore, that there will be systematic differences between data derived from censuses, where migrants are defined either by birth-place in relation to current residence, current residence in relation to residence at a prior fixed date, or duration of current residence. Since at least some migrants, by census definition, will have been involved, by registration definition, in more than one migratory event, counts from registers should normally exceed those from censuses".

ELECTORAL ROLLS

Electoral rolls are also a potential source of internal migration data. The particulars usually required for registration of voters on Voter Registration forms provide useful information which can be used for the analysis of internal migration. Records are also usually kept of persons who transfer from one voting district to another. These records are not at present perfect in a large number of African countries, sometime making it possible for certain persons to vote more than once. However, the potential use of data from the electoral rolls exists and needs to be exploited firstly on an experimental basis before deciding on whether in some countries the electoral rolls can be used as a source of internal migration data. In this connexion, it should be noted that for such registers to be useful, they should contain, in addition to the usual information on identification and personal characteristics of the voter, some data on his migration history, at least the date of his most recent move and his place of previous residence. Such information from electoral registers will be useful in the analysis of primary migrants.

SCHOOL RECORDS

For transfer from one school to another in most African countries the pupil/student is issued with a transfer certificate which shows the same and address of his previous school, the level attained in that school in addition to other identification information. This transfer certificate is kept in the new school. In some cases entries are made in the appropriate school records of the most important of the information on the transfer certificate. On the basis of these school records, it is possible to assemble migration information in respect of such pupils/students. It should be noted that in most cases such pupils are secondary migrants.

This process of extracting migration information from school records is more complex for some African countries with an uneven distribution of schools because the transfer of pupils from one school to another does not necessarily reflect the transfer of his household/family from one locality to another. It is not unusual for parents to send their children to a larger locality to stay with relatives in order to attend school. In certain cases these children go back home every weekend. Thus analysis of migration from school records will require follow-up investigation to ensure that the students being studied are actual migrants. Inspite of these limitations school records provide a potential source of migration data. The national statistics office can influence through the Ministry of Education the way in which this type of records are kept and can even introduce additional items. Such additional questions should seek to establish inter alia whether the child transferred to the new locality with the whole family, part thereof or alone. With this addition it will be possible to use the school records to study the phenomenon of migration, since they will yield information on place of previous residence, time of move to present place of residence and whether move involved the whole household or not.

LABOUR RECORDS

Labour or employment records in respect of the employee should normally contain the employment history of the person. This is at present not so in many African countries. The problem of record keeping has not been solved satisfactorily. However, on the assumption that a complete employment history will be maintained in respect of each worker, mainly employees, it is possible to utilise these records in the study of migration. The full extent to which these records can be exploited depends on whether there is a measure of centralization in record keeping in respect of labour and employment in the particular country. Without this measure of centralization, the analyst will have considerable difficulty in assembling the date and thus the labour records will prove to be too costly a mechanism for exploiting migration data for purposes of analysis.

In this connexion, it should be noted that in the past in a number of African countries, information on tribe was required on many official records, including the employment record. In view of the decrease in the indices of concentration for various tribes due to the dispersal of tribal members, especially to the cities and large urban areas, tribal origin is no longer a good indication of internal migration. In addition, many African Governments have made it legally impossible for information on tribal origin to be recorded on any official forms.

SOCIAL SECURITY RECORDS

In a number of African countries social security schemes have been introduced in the place of previously contributory or non-contributory pension schemes. The principles underlining the operation of the social security schemes involve the accurate keeping of records containing the employment history of the worker. These records should indicate the places of previous employment. In many cases place of work and place of residence will be the same. In other cases the two will be different and the Social Security Authorities may or may not keep both addresses. If the Social Security records show the addresses of previous residence then they become a very useful potential source of migration data. If they show only addresses of previous places of work then the resulting date can only be used to study mobility in its wider sens.

Most social security records by the very nature of the system are centralised and thus lead to their easy exploitation for purposes of migration analysis. If the full range of information is kept on the records, it is possible to find out the total number of all movements after a certain age, the dates of such movements, the localities of previous residence and the duration of stay in each locality. This information will be useful in studying such aspects of migration as fixed-term or period migration, life-time migration, migration interval, migration streams etc. It must be mentioned however that the state of record keeping in Social Security schemes, the shroud of confidentiality which surrounds the records and other inadequacies of the system make them at present not a useful source of data for migration analysis. However the potential for future exploitation exists.

PARISH REGISTERS

As already stated, parish registers are not administrative records since they are not maintained by the central or local government but rather by church authorities. They are being considered here because they can be a useful tool for the exploitation of internal migration data. In cases where parish registers are kept, they would normally show the date of birth of a person and other personal details. When the person is transferred to another locality, it is normal for him to take a transfer certificate from his old church to his new one and his personal details are then recorded in his new church. It is possible to use this record, if well kept, to obtain information on his previous residence and duration of stay in the present locality. However since the church does not occupy a predominant role in Africa, the proportion of the population covered by the parish register system is rather small. Thus even if the system is reliable and adequate, the coverage is so small as not to be very useful at this time. It is however a source of migration data which can be exploited for purely academic research.

CONCLUSION

In this short paper an attempt has been made to examine the possibility of exploiting adminsitrative records for migration analysis in African countries. It is recognised that these records are incomplete, defective and in most cases decentralised. In spite of these limitations, administrative records are potential sources of migration data.

Because of their incompleteness, major biases are likely to arise in their use. The first step is for National Statistical Services to assist in improving the coverage of events expected to be registered in any of the records considered above. The second step is to try to use the data available, bearing in mind that adjustments can be made in the data through some form of ratio of regression estimation. It should be noted that if use is not made of the records for migration data, it is unlikely that the quality of the migration data in the records will ever improve.

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UTILISATION DES DOCUMENTS ADMINISTRATIFS ET AUTRES POUR L'ANALYSE DE LA MIGRATION INTERNE

RESUME

Ce sont les cinq principaux types de documents administratifs, à savoir: les registres de population, les listes électorales, les registres scolaires, les registres concernant l'emploi et les registres de la sécurité sociale - qui peuvent servir dans l'analyse de la migration interne - qui font l'objet du présent chapitre.

En particulier, la possibilité d'exploiter les documents administratifs pour l'analyse de la migration dans les pays africains et les lacunes de ces documents sont examinées. Il a été constaté que ces documents sont incomplets, défectueux et dans la plupart des cas limités à des zones. Malgré ces lacunes, les documents administratifs sont des sources potentielles de données sur les migrations.

Etant donné le caractère incomplet de ces documents, d'importantes erreurs peuvent vraisemblablement découler de leur utilisation. A cet égard, il est proposé les stratégies suivantes dans l'étude pour redresser la situation:

(a) Améliorer la couverture des événements à enregistrer dans l'un quelconque des documents indiqués plus haut,

(b) S'efforcer d'améliorer la qualité des données provenant de ces sources.

DETERMINANTS AND CONSEQUENCES OF INTERNAL MIGRATION - SOME AFRICAN FINDINGS

prepared by the Population Division of ECA

1. INTRODUCTION

Two of the important population phenomena of the African continent are:

(a) the coexistence of vast stretches of virtually uninhabited land and extremely high density areas, and

(b) very high rates of population growth in certain parts and low or negative growth in others.

For example in Ghana, population densities, according to the 1970 figures range from 10 for Northern region to 329 for greater Accra region. The growth rate of population in Libya is around 4 per cent per annum and several cities are growing with rates exceeding 6 per cent while growth rates in Upper Volta, Lesotho and in rural parts of a large number of countries are either low or are even negative.

What are the causes of these disparities? Natural growth cannot explain the very high or low growth of populations. It is migration or movement of people from one place to another which brings in such disparities. When a person or group of persons move from one place to another, there are many reasons for their action. Factors determining the decision or action of movement are economic, social, ecological or physical. The movement can be voluntary (autogenic) or involuntary (allogenic). Again, as every cause has an effect, these movements have consequences on the individual, his family or group and the environment.

Since there are advantages and disadvantages in population distribution it is essential that the phenomenon be studied and the pros and cons analysed to enable planners and policy makers orient their programmes accordingly.

African governments are very much concerned with the existing distribution and the current high rates of urbanisation. In 1977, an enquiry by the United Nations (United Nations, 1979) noted that 36 out of 49 countries in the continent felt that their spatial distribution was extremely unacceptable and needed radical intervention, 9 felt the spatial distribution substantially unacceptable and called for substantial intervention and the remaining 3 perceived the spatial distribution as partially unacceptable and maritted limited interventics. A similar enquiry in 1979 (United Nations, 1980) indicated virtually an unchanged situation. It found that in Africa as a whole, the irrational distribution of population which has resulted from a complex series of historical and economic factors was regarded second only to high morbidity and mortality as a demographic problem requiring urgent resolution.

In a recent review of research findings from developing countries, Simmons et al stated, "less attention has been given to migration within the rural sectors, to the consequences of migration for sending and receiving communities and to the impact of government development policies on population distribution ..." (Simmons, 1977). They continued by stressing the fact that "there is a notorious scarcity of studies that evaluate the consequences of migration in place of origin and destination".

This paper attempts to study the causes and consequences of migration in the continent based on a review of findings from recent researches.

2. DETERMINANTS OF MIGRATION

One of the legacies inherited by most African countries from the colonial past has been the unevenness of development. The siting of administrative, commercial, industrial, cultural, recreational, health and educational facilities in a few selected areas and the bias towards such areas in the development strategy even after independence have been responsible for the movements of people to such areas. The flocking of people to the capital or port cities, to industrial and commercial centres and to those with health or educational facilities is well documented. The location of most of these facilities in one or two places only makes the problem acute. Though most of the movement has been from rural to urban areas, there are sizeable rural to rural movements such as those from the impoverished hinterland of migrant labour to areas with agricultural development schemes as in the Sudan. The relocation of people consequent on construction of dams, plantations etc. is another manifestation of movement engendered by developmental activities but mostly such moves are involuntary. Yet another consequence of development is the fall in mortality resulting in rapid population growth creating pressure on land and acting as a push factor. Even though Boserup (Boserup, 1965) postulated that increase in population density will hasten the adoption of more intensive methods of farming and thus alleviate the pressure on available resources, Van de Walle (Van de Walle, 1974) observed that within some self contained land units this may hold only until a certain point is reached. Again, as noted in Lesotho (Kingdom of Lesotho, Forthcoming) even low population density under inappropriate technology necessitated by out migration can contribute to land erosion and destruction of agricultural potential creating a viscious circle.

Related to skewness in development is income and opportunity differentials between areas. Harris and Todaro (Harris et al, 1970) hypothesised that income differentials discounted for unemployment determine migration decisions. While Greenwood (Greenwood, 1969) noted a positive correlation of migration with wages in destination and an opposite tendency with wage in origin areas based on data for Egypt, Rempel's study on Kenya (Rempel, 1970) was inconclusive and on the other hand some studies in Ghana came to opposite results (Godfrey, 1973).

As Nelson (Nelson, 1979) mentioned "the conventional assumption is that most rural out-migration is propelled by poverty, hence better rural opportunities and living standards should reduce the exodus. Yet the heaviest rates of out-migration are usually not from the poorest and most remote regions and villages nor from the lowest socio-economic strata within villages. Moreover, rural development in some instances

appears to have accelerated out-migration instead of retarding." A similar observation was made at a seminar organised by the UN (United Nations, 1968) "If certain amenities that a migrant seeks such as better education are brought to him in the village, his migratory tendency may paradoxically increase - a small taste of modernisation creating a demand for more".

Distance between origin and destination areas which is directly proportional to cost of transportation has been noted to be an inhibiting factor on migration. In addition to monetary costs, distance may entail an element of the migrant to a vastly different socio cultural environment deterring movement. Ethnic, linguistic and other variations over space have discouraged mobility, but these are reducing due to better education and communication. However, distance by itself may not explain some of the observed migration patterns. For example, in the Sudan the Furs and the Zaghawas of Northern Darfur are more mobile than others, even though they are further than other tribes around the agricultural schemes. Even among these there are marked differences - one tribe being not only more mobile but being also more permanent in their migration (Khogali, 1978).

Some of the socio-economic costs of long distance migration are decreased if there are friends or relatives in destination areas, by giving the intending migrant a sense of economic and social security and also in many cases these contacts help him in procuring a job. In most of the larger towns and cities in the region one can easily note people from the same ethnic or language group staying together. The migration of the Frafra (Mabila, 1975) in Ghana and of the Furs and Zaghawas in Sudan are points illustrating the fact that distance and cost are not as important in migration as some socio cultural factors. Another clear illustration of socio cultural factors hindering migration is that of the Southern Sudanese who in spite of their poor economic and ecological conditions are not as mobile as some of the Northern tribes in the Sudan (Republic of Sudan, 1968).

Education has been an important factor determining migration. According to Pryor (Pryor, 1981), "education frequently on a western model even in Africa and Asia has prepared people for migration or attracted them to the city: similarly mass media exposure is greatest in urban areas, but it is an important contributor to the information diffusion which triggers migration at the same time as it challenges and changes many rural values". In the United Republic of Tanzania for example, rural males aged 20-24 with five or more years of schooling were ten times more likely to move to cities than similar males with less or no education (Barnum, 1977) and educated persons were anxious to leave the agricultural sector and increasingly preferred white collar jobs (Barnum, 1980).

Since education boosts not only one's social but also economic level, a sizeable volume of migration from areas with less to better educational facilities takes place. Again, scattered population settlements are not conducive to site educational, cultural and recreational facilities and people in these areas tend to migrate to better endowed areas resulting in further depletion of population.

With the expansion of primary education, the quest for higher education and jobs has propelled the people from their once tranquil life to towns and cities. For example, a study on the effect of primary education in Western Nigeria revealed that in 1963, seven years after the introduction, about half of the graduates had migrated to the towns because they were unable to find suitable jobs in the rural areas (Lekinwa, 1975).

In Ghana, Caldwell (Caldwell, 1968) noted that people moved to enable their children have the type of education they wished. Since only larger towns and cities could provide higher and specialised type of training, naturally the movement was towards these centres. Gould (Gould, 1984) calculated 'threshold population densities around primary schools in Africa and noted that in many countries even the national average density was much lower than the threshold implying that in these countries it may be difficult to establish schools of the type normally found elsewhere. Earlier (Gould, 1976) he had found "positive relationship between population density and enrolment at all scales of analysis in any country, and the lack of schools in areas of low population density is partly responsible for this". For higher education the situation would be magnified.

Another important reason for migration is to take advantage of health facilities. Since the conditions of life in certain areas are not conducive to healthy life people move out of such places. For example, the presence of sleeping sickness and the absence of clean drinking water, waste disposal etc. are responsible for avoidance of some places. Even though lack of water for human existence makes a place unattractive, too much water also may create problems, as in the Southern Sudan. Climatic conditions also play an important role in human settlements. Provision of socio cultural activities like cinema, parks, libraries, etc. make a place more lively than an isolated remote hamlet with no variations in the rhythm of life. Provision of electricity is yet another important aspect for attracting population and to keep those who are present.

Spontaneous agricultural resettlement is yet another aspect of population mobility. Wood (Wood, 1982) reported about the magnitude and type of such relocation in Ethiopia. Even though this type of mobility is not very large, it contributes to reducing population pressure in existing agricultural land and brings under cultivation additional land. In recent years in Ethiopia organised resettlement of peasants has been observed to be more massive (Wood, 1982). However, due to the land tenure system, spontaneous movement in search of land has not been large in the continent as noted in a recent study in Lesotho (Kingdom of Lesotho, Forthcoming).

In a similar fashion, the villagisation programme in Tanzania, though focussed on more than agricultural resettlement, has been yet another bold and imaginative population redistribution scheme in Tanzania, so that socio economic developmental activities could be shared by the vast majority of the masses (Thomas, 1982). The creation of new towns and especially the planning of new capitals as in Tanzania (Dodoma), Malawi (Lilongwe) and Nigeria (Abuja) all have syphoned off population from the congested old colonial capitals.

The congenial environment of the urban areas in general and large towns and cities in particular and the dull and drab existence in the rural areas also has engendered mobility. To a certain extent this is aided by publicity and information supplied by those staying in these places and the media in most countries contribute to perpetuate the notion, adding to the push-pull factors of migration.

Then there are a host of other factors which are unpredictable and which affect population mobility - wars, famines, epidemics, locust invasions, political unrest, etc. Even though some of the movement could be a cross international boundaries, there is a sizeable movement within countries when any one of the above events occurs. Refugee movements as noted during the disturbed conditions in the 1960's and early 1970's in the Sudan, the drought in the Sahel in the 1970's, famine conditions in Ethiopia in the early 1970's, the bordering of population in Zimbabwe and Mozambique during their freedom struggle etc. are some of the best known examples of such movements.

3. CONSEQUENCES OF MIGRATION

Migration can be considered as a means of population distribution and equilibrium. Areas of opportunities attract the needed population and the less attractive and depressed areas lose population. Thus both the sending and receiving areas are affected by migration. It also has implications on the individual, his family or group of persons and the environment.

Not only is there a quantitative effect, there are also qualitative aspects as migrants are selective of age, sex and other characteristics. For example, rural to urban migrants have been observed to be young males. Even rural to rural agricultural labour movement is composed of adults - mostly males. In Western Nigeria (Essang, 1974) "increasing rural-urban migration was associated with an increasing mean age of rural households and subsequent rural stagnation as hired replacement labour was not available in poor areas". On the other hand, Byerlee and others (1976) found in Sierra Leone that, "return migrants tended to be older than the rural population as a whole". According to a study recently completed (Kingdom of Lesotho, Forthcoming), migration resulted in absence of adult males for long and critical periods of time in Lesotho with consequences on land utilisation, agriculture and the environment.

Whereas in most African countries, rural to urban migrants were noted to be predominantly males, in Ethiopia (Amde, 1977) it was observed that females predominated. The problems created by an unbalanced sex ratio in an area are well known.

In the Sudan, whereas long distance and perhaps long-term migrants were predominantly male adults, short distance seasonal agricultural workers were mostly females. Cotton pickers had very few children and older persons among them and the sex ratio of those from the neighbouring areas were much lower than those from distant places (Republic of Sudan, 1990).

In Lesotho whereas the sex ratio of migrants from same village/town was 137, it was 29 among migrants from different villages/towns but from the same district and 42 for inter district migrants. The rather low sex ratio of inter village movement is explained by the custom of marriage and living arrangements. Inter district movements are usually of males but in the case of Lesotho the lowered sex ratio is attributed to the exodus of male adults to the Republic of South Africa (Kingdom of Lesotho, Forthcoming).

One effect of migration from rural areas has been the reduction of pressure on the available land. According to Henin (Henin, 1961), "this type of migration would have the effect of easing the pressure on the land in the province of origin where marginal productivity of labour may be zero or near to zero resulting from disguised unemployment" whereas Bushra (Bushra, 1975) felt that "heavy migration from the Northern province, for instance, has greatly disrupted demographic and economic conditions. As a result of out-migration, the population of this province is at present composed of children, old people and adult females, all of whom contribute very little to economic production". We have already referred to similar observations to that of Bushra reported in respect of Western Nigeria and Lesotho.

Another sequel of migration is the absence of males or postponement of marriages resulting in reduced fertility. In the case of Lesotho, the huge male adult migration is perhaps the cause for the low growth rate of population - either by reduced fertility or increased mortality acquired through the hazardous mine work engaged in by a vast majority of migrants (Kingdom of Lesotho, 1981). It was reported in the analysis of the 1973 census of Sudan that "on the negative side it has been noted that the migrant agricultural workers in the new mechanised agricultural schemes living in poor environmental conditions are prone to water borne diseases which they spread by their frequent movements"(Republic of Sudan, 1980).

A further consequence of migration is the separation of family, with and kin. According to Khopali (Khopali, 1976), migration brought about separation of families and weakening and disruption of kinship ties. In Lesotho a study made by AIM (Agency for International Mission, 1975) stated "the anguished cri de coeur of the women left behind is that the mine eats up our men". It was noted that women left behind indicated serious strain because they had to bear and rear children, look after fields and livestock and face the harsh life without the help of male adults.

The presence of a large number of young adults in towns without adequate avenues for employment has created problems for these areas. Juvenile delinquency, crime, prostitution, etc. are attributed to the overcrowded nature of many cities. Growth of slums and shanty towns consequent on the vast increase in population without commensurate improvement in housing and other amenities of life has jeopardised the health and wellbeing of the inhabitants of these areas.. The pressure on existing utilities have made great strains on the financial and physical resources of the administration. At the same time the existing facilities of the out-migration areas are underutilised. A classic example of this phenomenon is in respect of the erstwhile iron mining town of Marampa which today resembles a ghost town with schools etc. lying unused because the people have gone away from this once prosperous town. On the other hand Freetown is bursting with population straining its educational, health and other facilities.

In addition to the quantitative and demographic aspects, migrants also are selective in respect of education, skill level, etc. The drain of the better educated and qualified persons is a loss to the sending areas and if the receiving areas do not have worthwhile occupations to employ them, then it is a national loss. The exodus of the better educated not only drains the sending area, it also takes away the most innovative segment of the population and thus makes the area more depressed. Also the very fact that population is moving away makes it uneconomic to put some of the required socio economic infrastructure in these places, creating a vicious circle. Even though migrants do remit cash and other items to their origin areas, the loss of manpower may be sometimes more than the gain from these sources. Moreover, as noted in the case of Lesotho (Kingdom of Lesotho, Forthcoming), remittances may not be utilised for improvement of their home villages but for buying cattle which with limited grazing lands might result in destroying the agricultural potential of the land or frittered away on consumption goods purchased in the Republic of South Africa.

An important aspect of return migration and frequent communications and dealings between origin and destination areas is the spread of modernisation and information. But in many cases the contrary prospect of ruralisation of urban areas and spreading of diseases also have been noted.

4. POLICY IMPLICATIONS AND CONCLUSIONS

From the foregoing it is obvious that migration has positive and negative aspects. A certain amount of agglomeration is needed before some of the community level facilities and amenities could be made available at a reasonable cost and effort. At the same time, overcrowded urban areas are breeding grounds for disaffection and social problems. According to Whitney (Whitney, 1979) there is "recognition that not only rapid rates of population growth but also the distribution of population within a country are among the variables that may limit the success of its development plans. Increasingly, a maldistribution between location of population and of opportunities for the productive use of both human and natural resources threatens the attainment of development goals. Migration provides one mechanism to achieve a better balance between supply and demand".

Even though Clarke ([Clarke, 1982]) felt that "government perception however are a long way from government policies and so far many African governments have been more concerned with the aggregate problem of social and economic development than their spatial implication upon population distribution", it is clear that efforts are afoot in a majority of countries to retain population in rural areas by means of measures like creation of more employment opportunities in agro based industries, provision of infrastructure like water, schools, health facilities, etc. Villagisation schemes as in Tanzania is a model for countries to follow but some of the problems this idea has brought forward must be solved before such schemes become very successful.

Agriculture is the mainstay of a vast majority of the people in the continent and the existing situation of food shortages could easily be solved if this sector of the economy is given its due recognition. Not only agriculture should be made attractive, but food production must be made lucrative. Clearly orientation towards food crops as against export cash crops might solve some of the problems.

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CAUSES ET CONSEQUENCES DE LA MIGRATION INTERNE
QUELQUES CONSTATATIONS EN AFRIQUE

RESUME

Le présent chapitre se divise en trois parties principales. Après l'introduction la première partie examine les causes de la migration interne, la deuxième partie en examine les conséquences tandis que la troisième est une évaluation des incidences sur les politiques.

L'installation, pendant la période coloniale, des services administratifs, commerciaux, industriels, culturels ainsi que des centres de loisirs, des formations sanitaires et des établissements scolaires dans des zones choisies des pays a influé sur les mouvements de la population en Afrique. Une explication théorique de la migration des zones rurales vers les zones urbaines a été fournie par Harris et Todaro, dont l'hypothèse impute cette migration aux écarts de revenus, compte tenu du chômage.

Les rôles de la distance et de l'éducation dans la prise de décision de migrer ont aussi été abordés dans le présent chapitre.

La distance, prise dans le sens général englobant tant l'espace que les différences culturelles s'est révélé être un obstacle à la migration. C'est ainsi que des différences d'ordre ethnique, linguistique ou autre ont découragé la migration dans nombre de pays africains. Par ailleurs un niveau d'instruction plus élevé et une meilleure possibilité de communication ont amélioré la situation créée par l'éloignement. En outre, une partie du coût socio-économique des migrations sur de longues distances est réduite s'il y a, dans les zones de destination, des amis et des parents, ce qui donne aux migrants potentiels un certain bien-être sur le plan économique et social.

L'éducation, selon la littérature qui a été examinée, a été une cause importante de migration. Des études faites par Barnum (République-Unie de Tanzanie) et Caldwell (Ghana) ont fait apparaître une corrélation positive des niveaux d'instruction de migrants et des taux de migration.

En ce qui concerne les conséquences de la migration, il ressort de l'examen des études qu'elles sont variées. Mais en général, les études semblent souligner les conséquences défavorables de la migration sur les lieux d'origine (toujours des zones rurales) telles que le déséquilibre de la répartition par sexe et par âge.

La partie du chapitre concernant les incidences sur les politiques indique que la migration comporte des aspects positifs et négatifs.

USES OF INTERNAL MIGRATION DATA

SOURCES AND TYPES OF MIGRATION DATA

Internal migration data like all other statistical data can be used for development planning, policy formulation, administration and research. Since there are different types of migration data, there are correspondingly different uses of such data, though some of these overlap. To fully appreciate the different uses of migration data, it is necessary to list the types of data usually collected through any of the relevant data collection mechanisms. As discussed in two papers included in this bulletin: Sample Surveys on Internal Migration in Africa, 1960-1980: Scope methodologies and problems, and Concepts, Classifications and Definitions of internal migration statistics in Africa, there are four main sources of internal migration data: population censuses, sample surveys, population registers and other administrative records.

The main types of data collected in population censuses are: place of birth, duration of residence, place of last previous residence and place of residence at a fixed prior date. It may be noted that most of the raw data collected in censuses have to be refined before they can be used. This is due not only to the fact that the limitations of the data such as accuracy and adequacy impose restrictions on the interpretation of the data but also because most of the data can only be used in its derived form. For example, "place of birth" data collected in censuses enable computations of life-time migrants and intercensal migration to be made. It is in these derived forms that the data are normally used.

Sample surveys offer a mechanism for the introduction of more complex questions. In this connexion three types of sample surveys can be distinguished: the general demographic survey, the integrated demographic, social and economic survey and the special migration survey.

The general demographic survey enquires into all three components of population growth: fertility, mortality and migration (internal as well as international). Since the survey covers three different but interrelated subject-fields, the questions which are devoted solely to internal migration are restricted usually to the topics investigated in population censuses

The same limitation is found in the integrated household survey approach. But it should be noted that under the African Household Survey Capability Programme (AHSCP), it is envisaged that the questions will be divided between a core questionnaire and special modules. The core items suggested by ECA include place of birth.

In addition to the core, a special module or a combination of more than one module can be attached. Under this format, a more detailed migration module can be canvassed during the survey round. Thus if the country's interest is in migration of labour or rural-urban migration, the emphasis in the module will be on obtaining quantitative data from the module to enable an assessment of the situation to be made.

The third type of survey is the special and usually detailed migration survey of the type planned for the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) region in 1979. The topics were many and varied. The core questionnaire consisted of two parts: household schedule and individual questionnaire. The household schedule collected the following information:

(a) For usual residents

Name, relationship to household, sex, age, place of origin, migration status, current residential status, education, activity status, marital status.

(b) For non-usual residents

Name, relationship to head of household, sex, age, place of origin, migration status, duration of present stay, usual residence, purpose of stay, education, activity status, marital status.

(c) Movement from the household

(During last 5 years or since the household had been in dwelling unit). Name, relationship, sex, place of origin, present residence, reason for moving, duration of absence, number of returns to household during the last 12 months, personal details at the time of the move, usual current activity.

(d) Money and goods received by household members

(e) Land holding

(f) Housing characteristics

For individual respondents the topics covered were as follows:

(a) Migration history and experience, life history

(b) Mobility and Activities during the last 12 months

(c) Future mobility

The above list of topics recommended for investigation in national migration surveys under ESCAP are by no means exhaustive. Additional modules on other aspects of internal migration, especially those dealing with the determinants and consequences of migration can be attached. The actual content of the survey will depend on the applications to which the data will be put.

Population registers can also be a source of migration data. Regrettably there is no country in the region with a well developed population register which would yield reliable and adequate migration data. Ethiopia, Tanzania and Somalia have recording systems which could with some modifications be converted into population registers. The United Nations inquiry into national practices (United Nations, 1979) showed that of 25 African countries reporting sources of data, 22 indicated that they obtained their data exclusively from field inquiries (i.e., censuses and surveys), none from population registers

However, the current situation should not preclude consideration being given in this paper to the potential uses of population registers to obtain migration data. It should be said at the outset that population registers are not designed primarily for recording information on migration. They usually contain information on birth date, marriage history, children and movements which are needed for administrative purposes such as establishing legal identity, conscription into the armed forces, and preparation of electoral registers. The information generated from these registers which usually contain information on local residential addresses as well can be used to study movements. The major problems with population registers as pointed out in the United Nations Study (United Nations, 1979) "is the possibility that reliance may be placed on poorly maintained registers of an unknown level of accuracy".

A full account of the uses of continuous registration in migration analysis is given in Annex I of UN Manual VI (United Nations, 1970). It should be stressed in this connexion that "an important use of continuous registers is in the historical time series they provide".

Other administrative records such as school enrolment and labour or employment registers may also furnish information which can be used to study migratory flows. However, as already stated, there is no African country, where such data are reliable and adequate enough to be used for the study of migration.

In the following sections some of the actual and potential uses of internal migration data in the African region will be considered, with the emphasis being put on analytical and planning uses.

ANALYSIS AND RESEARCH

One of the important uses of migration data is for analytical purposes. Some of the measures and indices derived from migration data are given in Manual VI, Methods of measuring internal migration (United Nations, 1970). They include migration streams, net migration, life-time migrants, index of redistribution, indices of migration differentials and selectivity and other indices such as indices of preference, velocity, net velocity and effectiveness. Most of these measures are derivable from the migration data collected in population censuses and in general demographic surveys.

The more detailed migration inquiries like the ESCAP migration surveys admit of more sophisticated analysis. The suggested content of the preliminary report on substantive findings of the survey is given in Annex I. In Annex II the important issues which the survey results will help in studying are listed. The research agenda from a special migration survey as shown in both Annexes I and II is a large and complex one. For African countries, the content of the questionnaire will have to be determined by the applications to which the data will be put.

As implied in the paper on the "Analysis of Determinants and Consequences of Migration" published in this volume, the analysis of migration in Africa can be said to have focussed on six main issues:

(a) Volume and direction of migratory flows

(b) Interrelations between migration and other demographic variables (fertility and mortality)

(c) Determinants of migration

(d) Consequences of migration

(e) Population distribution and redistribution

(f) Urbanization and Projection of urban population

In this connexion, it should be noted that a number of analysts in the region have been hampered in their work by the absence of relevant tables which could have been prepared from the data collected. Most large-scale surveys are generally undertaken by national statistical offices which are generally unwilling to make copies of tapes available to researchers. At the same time they cannot also produce the additional tabulations for the users due to priorities in their own work programmes. Thus the analyst in Africa, except in cases where he collects his own data, is unable to use the data collected by others to maximum advantage. However, as pointed out by the IUSSP Committee on urbanization and population redistribution (IUSSP Papers No. 13, 1978), analysis of the economic and social consequences of migration and other population processes have "benefited in recent years from newly available micro-data (household surveys, for example), which often furnish residencial histories.... The micro-data afford new and broader analytical perspectives on migration and urbanization, and recent studies using them have discovered unexpectedly complex behaviours underlying these processes".

The IUSSP Committee in two other publications (IUSSP, 1974 and IUSSP, 1975) have dealt with urbanization--the basic data needed for its study and the measurement and projection of urban population. These illustrate one aspect of the study of internal migration.

Another set of studies of relevance to Africa are those recorded in Clarke and Kosinski (Clarke J.I. and Kosinski, L.A., 1982). These deal with redistribution of population in Africa and have already been referred to in the paper on the "Analysis of Determinants and Consequences of Migration" which is included in this issue of the bulletin.

It is also necessary to refer briefly to the role of policy-oriented research in stimulating policy formulation and development planning. Research normally tests a hypothesis or a series of hypotenses as implied in Annex III. Whatever the outcome of such tests, the results should normally provide an input into policy formulation and the subsequent action programmes to put the policies

POLICY FORMULATION

Government policy formulation is usually a complex process. It should normally take into account political, social, cultural and economic considerations. The results of research should have an impact on this process. In this connexion, it should be noted that the researchers role is usually to determine whether there is a problem. If so how did it come about? What are the possible solutions? It is the policy-makers role to decide whether enough information has been accumulated to enable him to take a definite decision on a course of action. In the field of internal migration, the two main problems facing the policy-maker in Africa is rural-urban migration and population redistribution. Some countries explicitly or implicitly do not recognise that there is a problem. Others recognise that there is a problem and formulate policies to counteract it. Unfortunately, not many African Governments have taken too seriously the data obtained from migration surveys and the results of relevant analysis and research into account when formulating their policies. The result has been that policies which have been formulated with respect to, say, rural development as a means of checking the rural-urban influx have failed to achieve their objectives.

In the United Nations Study referred to earlier (United Nations, 1979) of the 22 African countries reporting national uses, 19 used the data for the study of movements of population from rural to urban areas and/or from smaller to larger urban areas, 5 for planning of community, recreational and social services, 8 for the study of movements of population from economically depressed to prosperous areas, 2 for the preparation of sub-national population estimates and/or projections, 6 for development planning and policy-making, 5 for the study of fertility patterns of migrants and none for the study of movements of population following natural disasters. Although the last category showed a nil return, it should not be assumed that Africa does not use migration data for that purpose. At least, the Ethiopian Relief and Rehabilitation Commission does use such data to study movements of population after natural disasters.

In the above categorization, it should be noted that policy-formulation and development planning have been grouped together. In this presentation, they have been separated since logically policy-making should precede planning.

PLANNING

In this section, planning is considered under two main sub-divisions: physical and development planning. Migration data are used to plan new towns and for sitting social amenities like community centres in existing localities. It may be noted that in planning of the new capital of Nigeria, Abuja, the Nigerian Government commissioned a series of studies (UN Economic Commission for Africa I, II, III & IV, 1980) in which migration data played a leading role. The main task assigned to ECA was to estimate the initial (i.e., at inauguration) population and provide population projections up to the year 2000. The surveys conducted not only provided rough estimates of natural increase but within the limitations of the study also provided useful information on migration. In particular, as shown in Table 9.5 of Report II (UNECA, 1980 (II)), the following projected rates of annual growth could not have been based on natural increase alone which would be around 3.1 per cent only. Migration was therefore the dominant component of these rates.

Table: Assumed Annual Growth Rates by Projection Variant - Abuja

Variant	Annual Growth Rate (%)			
	1986-1990	1990-1995	1995-2000	1986-2000
High	28	14	13	17.6
Medium	22	13	11	14.8
Low	18	10	9	11.9

Whatever variant of population projection is accepted, the policy-maker has to decide on what options to select to govern movements to Abuja and what programmes of physical development, including provision of adequate environmental and recreational facilities, etc., should be approved to ensure that the new capital does not go the way of the old capital. In this connexion, it should be noted that the Nigerian Government through its Federal Capital Development Authority commissioned ECA to carry out these studies since it was aware that for proper physical planning, the size and characteristics of the population, mainly from Lagos State in the initial phases of the development of Abuja, would need to be taken into account. Similar studies are required in any population redistribution scheme.

Related to physical planning is the more complex area of development planning. Since such planning aims at improving the economic and social well-being of society, population data again play an important role. Many of the studies on determinants and consequences of internal migration in Africa have had as part of their objectives the ascertaining of the causal factors underlying such movements and, where such movements are assumed to have a negative effect on development, to evolve programmes aimed at stemming the flow of migrants, especially from rural and small urban areas to cities and large towns. Migration data are essential not only for the preparation of such plans but are also needed for monitoring plan implementation, appraisal and evaluation.

In this connexion, Abuja in Nigeria, Lilongwe in Malawi and Dodoma in Tanzania could be viewed as part of government plans to halt the excessive growth rates of Lagos, Zomba and Dar-es-Salaam respectively while at the same time stimulating growth and development in other neglected areas.

As indicated in Annex III, relevant internal migration data enables studies on "the close interrelationships between population movements and the actual disparities in economic opportunities and social amenities between different regions of the country, and between rural and urban areas in particular" to be carried out. The results of such studies would indicate the need for government action to affect population redistribution.

Population projections for sub-national areas are now playing an important role in development planning. Regional and district development plans have become accepted as an integral part of national development plans in such countries as Botswana and Kenya. Such regional and district development plans derive part of the data for their formulation from population projections in which estimates of migration rates play an important part. It may be noted in this respect that some demographers advocate that data on "place of residence at a fixed prior date" should be translated into data on "place of residence five years before the census (or survey)", since population estimates are usually made in five-year age groups.

ADMINISTRATION

Most of the uses of migration data outlined above are also applicable to administration. The administrator should be aware of the volume and characteristics of in-migrants or out-migrants since in some cases such movements have political as well as socio-economic implications. An unusual exodus of a large number of residents of an area may signal large-scale discontent while a significant influx could create problems of housing, health and job opportunities. Thus, it is essential that administrators keep abreast of migration trends in their areas of jurisdiction.

CONCLUSION

In this paper, an attempt has been made to list the principal uses of internal migration data. Not all these uses are currently being made by all African countries. As more migration data become available principally through population censuses and integrated multi-subject household surveys such as these envisaged under the African Household Survey Capability Programme (AHSCP), their uses will undoubtedly increase. There is need, however, for increasing the level of use by training more analysts and by making policy-makers, planners and administrators aware of the usefulness of quantitative data in their work.

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ANNEX I

ANALYSIS OF THE RESULTS

(Extracted from United Nations, 1980 (I))

The primary analytical purpose of the survey is to identify the pattern and types of population movements, the factors affecting mobility behaviour and the impact of migration on socio-economic development.

A series of technical papers will be produced in which appropriate techniques will be used in detailed analysis of the data for different issues. Emphasis will be placed on the interpretation of the significance of the findings for policy formulation. It is expected that the survey materials will provide important information on the role of migration in the development process. Among the issues which will be studied are the following:

(a) Volume of the migration streams between metropolitan areas, cities, towns and rural localities; this will include attention to rural-rural, urban-urban, urban-rural and rural-urban movements;

(b) Identification of the different types of movements, ranging from permanent migration at one extreme to daily commuting at the other, with provision for intervening categories such as single movement, multiple movement, return movement and circular movement;

(c) Characteristics of various types of migrants and movers and how they differ from non-migrants;

(d) Causal factors underlying different types and directions of movements, including migrants' attitudes and motivations;

(e) Study of the interrelations between the state of socio-economic development in urban and rural localities and the types of movements;

(f) Factors governing the decision-making process of the movement;

(g) Degree of adjustment and assimilation of migrants to urban/rural life, including social, psychological and cultural factors;

(h) Interrelations between population movements and family structure;

(i) Interrelations between population movements and changes in vertility levels;

(j) Impact of rural development, including factors such as irrigation projects, the green revolution and the location of industry, on settlement patterns;

(k) Impact of agricultural systems on seasonal movements;

(l) Impact of the development of low-cost transportation networks on the volume of commuting;

(m) Assessment of the links established through migrants with the place of origin, including the amount of remittances exchanged, and the impact of rural-to-urban migration as a potential stimulus for social change and rural development;

(n) Extent to which migrants contribute to the cities' problems in such areas as housing, education and health facilities, public utilities, transportation and pollution;

(o) Role of migration in changes in the volume of the urban and rural labour force;

(p) Implications of international migration from and to the country;

(q) Extent and characteristics of potential migrants and estimation of future patterns of migration.

ANNEX II

USE OF THE DATA: POLICY FORMULATION

(Extracted from United Nations, 1980 (I))

The data will be utilized by a national planning agency in each country for policy development and programme formulation related to population redistribution. It is hoped that, in this fashion, the data will be an impetus for action rather than research.

In the third phase, empirical evidence derived from the first and second phases will provide guidelines on a wide range of policy issues, including the following:

(a) The first major issue which emerges from migration research concerns identification of the problem. Is rural-urban migration primarily a manifestation of population explosion and spill-over from rural to urban areas, or is it a symptom of the stagnation of rural life, the lack of any significant improvement in agriculture or the modernization factors in the big cities that operate to attract rural migrants? Or again, is such migration the consequence of both poverty and population explosion? In other words, can migration in Asia be a mechanism through which population adjusts more effectively to changing demographic and economic conditions?

(b) Are rural-urban migration and increasing urbanization inevitable and irreversible in the developing countries of Asia?

(c) In most countries in the region, migration is not determined by the interplay of the forces of supply and demand in the labour market, but by the individual's initiatives, often based on inadequate or erroneous information which is usually provided by relatives and friends; the individual is motivated by their assistance to resettle in the new place. The lack of adequate information on the employment market makes the situation of labour movements unsatisfactory. Is it possible for the Government to replace the role of relatives and friends and to direct the flow of migration in a more realistic manner? This would make migration a positive element in the process of economic growth.

(d) One of the major problems connected with urbanization is the population of squatters' settlements and the provision of housing for the poor. Since the majority of these squatters are migrants, this problem must be considered an issue concerning migration and not merely housing, and not only in the limited context of land-use patterns, housing space and infrastructure costs, but also in the context of human settlement policies.

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(e) An issue which has received considerable attention from the point of view of policy and empirical study concerns the development of growth poles and small and medium-sized towns in order to counteract the "evils" of big city-based conglomerations. There has been an enormous amount of literature on this issue and yet there are not many examples of migration and urbanization policies which have really succeeded in counteracting metropolitan growth. In other words, what is the role of small and medium-sized towns in providing alternative destinations for rural to urban migrants and for migrants leaving big cities?

(f) The extent to which circular (temporary) migration and commuting should be encouraged as an alternative to permanent movement needs to be assessed much more fully. In particular, attention needs to be given to the cost-benefits of alternative forms of movements, both as they relate to the burden imposed on cities by temporary versus permanent migrants and the impact on places of origin, judged by the volume of remittances and introduction of modern ideas and practices.

The close interrelationships between population movements and the actual disparities in economic opportunities and social amenities between different regions of the country, and between rural and urban areas in particular, underlines the urgent need for more integrated homogeneous national population redistribution strategies. Research results at the macro-level on migration and urbanization and at the micro-level on population mobility behaviour would allow each government to take into account the net effect of policies intended primarily for the development of rural and urban areas on population movements and urbanization, or vice versa.

The analysis provided at macro- and micro-level will be used by a leading national planning agency in each country in the preparation of a discussion paper on policy formulation and programme development related to population redistribution at the national and subnational levels.

Among the alternative policies to be discussed in this paper in relation to the research findings are:

(a) Policies intended to affect population distribution in relation to land use, resettlement programmes and agrarian reform;

(b) Policies to influence location of industries, decongestion of cities and redistribution of population;

(c) Policies to restrict or encourage migration to cities;

(d) Policies for the development of medium-sized cities or establishment of new satelite towns as counter-magnets to the growth of big cities.

(e) Policies regarding regional economic planning in relation to migration and urbanization;

(f) Policies for promoting harmony between urbanization and other components of modernization, including the solution of environmental problems;

(g) Policies intended to apply modern technology and its impact on employment and population movements;

(h) Policies to spread educational facilities to the rural sector as a social goal and their impact on migration and urbanization.

ANNEX III

SOME ISSUES AND QUESTIONS WHICH CALL FOR RESEARCH

The IUSSP Committee on Urbanization and Population Redistribution (IUSSP, 1979) drew attention to the following four issues and questions which call for research:

1. THE BODY OF AVAILABLE THEORY EXPLAINING MIGRATION AND URBANIZATION.

   What are the limitations of these theories? What types of theories are needed? Given the present state of knowledge, what level of generality is best suited to meet scientific knowledge and practical needs?

2. THE AVAILABLE CONCEPTS AND MEASURES FOR COMPREHENDING MIGRATION AND URBANIZATION.

   What are the major deficiencies with existing concepts and statistics? Are analyses of new data sources impaired by the persistence of restrictive concepts derived from the earlier, more limited sources? Do new sources of data require new concepts to comprehend the evidence they offer?

3. INTERPRETATION OF CURRENT MIGRATION DEVELOPMENTS.

   What is the meaning of the recent renewal of population growth in non-metropolitan areas of several MDC's? Is this phenomenon merely an instance of statistical myopia? If not, how is it to be explained by existing theory, within the framework of which a fully urbanized society is regarded as the end of a process and the establishment of a condition? What implications does not the experience of MDC's have for future patterns of distribution and movement in LDC's?

4. ISSUES OF POLICY.

   If unguided migration fails to produce a structure favourable to development efforts, can mechanisms be devised to intervene in migration-urbanization processes in ways that will support national and regional planning goals? What are the costs and benefits of doing so, or of refraining from any deliberate intervention?

UTILISATION DES DONNEES SUR LES MIGRATIONS INTERNES

RESUME

Ce chapitre est consacré à un examen de l'utilisation des données sur les migrations dans l'analyse et la recherche, la planification du développement, l'élaboration des politiques et l'administration.

Les limitations des données provenant des différents systèmes de collecte de données - recensements de la population, enquêtes par sondage, registres de population et autres documents administratifs - aux fins susmentionnées sont aussi étudiées.

Enfin, l'étude fait ressortir que les statistiques migratoires ne servent actuellement qu'à peu de fins dans plusieurs pays africains et relève qu'à mesure que les données sur les migrations sont disponibles essentiellement grâce à des recensements de la population et à des enquêtes intégrées à objectifs multiples, l'utilisation de ces statistiques augmenteront incontestablement.

PROPOSITIONS EN VUE DE L'AMELIORATION DES STATISTIQUES SUR LES MIGRATIONS INTERNES EN AFRIQUE

UTILISATION DES STATISTIQUES SUR LES MIGRATIONS INTERNES

Les pays africains devraient prendre en considération les diverses possibilités d'utilisation des statistiques sur les migrations internes, rassembler les données pertinentes et entreprendre des études sur les mouvements de leurs populations.

Parmi les utilisations des statistiques des migrations internes intéressant la région africaine, on peut mentionner : i) la préparation des estimations de la population des diverses subdivisions administratives et des régions, ii) la préparation des projections régionales de la population, iii) l'étude de la distribution et de la redistribution de la population , iv) l'étude des corrélations entre la migration et les autres variables démographiques, en particulier la fécondité et la mortalité, v) la planification et l'administration du développement ainsi que l'élaboration des politiques en la matière, vi) la planification des services communautaires, récréatifs et sociaux, vii) l'aménagement régional.

Il faudrait en outre indiquer que l'accroissement rapide des populations urbaines constitue souvent un sujet de préoccupation dans la région en raison des problèmes socio-économiques que ce phénomène entraîne. Cette situation est due en partie à l'exode des populations rurales vers les zones urbaines. Les statistiques sur les migrations internes permettent de mesurer l'importance et la direction de ces mouvements, d'en analyser les causes et d'estimer les conséquences.

SOURCE DES STATISTIQUES SUR LES MIGRATIONS INTERNES

Il est recommandé d'utiliser les programmes nationaux d'enquête (en particulier les recensements de la population et les enquêtes démographiques comme principale source des statistiques sur les migrations internes. Cette approche a l'avantage de réduire le coût des opérations et d'offrir la possibilité de comparer et de relier les variables sur les migrations aux autres variables saisies dans la même enquête ou série d'enquêtes. Néanmoins, certains pays qui se trouvent à un stade relativement avancé de développement de la recherche pourraient également organiser des enquêtes spéciales pour recueillir des données sur les migrations internes.

Il serait utile d'inclure dans les questionnaires des recensements et enquêtes par sondage des questions sur les migrations portant sur : i) le lieu de naissance, ii) le lieu de résidence antérieur, iii) la durée de résidence au lieu de l'enquête et iv) le lieu de résidence à une date déterminée du passé.

Les questions (i) et (iv) ci-dessus permettent, en particulier, d'évaluer l'importance et la nature de la migration nette de retour des personnes ayant émigré anterieurement, soit a l'étranger (migration internationale), soit vers une autre région du meme pays (migration interne). Des questions plus elaborées peuvent etre incluses dans les enquêtes spéciales sur les migrations.

Dans les pays ou il existe des registres permanents de population et/ou autres fichiers administratifs divers relatifs a la population (registre d'immatriculation scolaire, recensements adminsitratifs, liste des électeurs, etc..), il est recommandé de procéder dans la mesure du possible, aux améliorations nécessaires pour faire en sorte que ces registres ou fichiers deviennent des sources viables et satisfaisantes de statistiques sur les migrations internes. Cette méthode permet notamment d'établir une chronologie historique complète dans le temps et de recueillir des données complètes sur les mouvements saisonniers et les fluctuations à court terme. De ce fait, elle constitue un complément utile de la méthode de collecte des données sur les migrations au moyen d'enquêtes.

Dans certains pays où les registres de population fonctionnent bien, les renseignements fournis par ces registres sur les migrants internes servaient de base au tirage d'un échantillon de population pour une enquete par sondage destinée à obtenir des informations sur les caractéristiques non enregistrées.

Il est recommandé de prevoir, tant pour les enqOêtes sur le terrain que pour les registres de population, des mesures permettant de procéder a des verifications internes ou externes de l'exactitude et du degre de complétude des resultats.

CONCEPTS, DEFINITIONS ET CLASSIFICATIONS

Les mouvements de population peuvent varier énormément dans l'espace (de quelques mètres a plusieurs milliers de kilomètres) et dans le temps (de quelques heures à plusieurs années) (Nations Unies, 1970). Bien que ces mouvements puissent avoir leur importance du point de vue socio-économique il n'est pas possible, ni souhaitable, de les considérer tous comme faisant partie des mouvements migratoires. Dans l'état actuel de la recherche en ce domaine, on s'accorde généralement a limiter la notion de migration interne à "un deplacement d'une zone de reference à une autre qui a entraîne un changement de residence" (Nations Unies, 1970). Les zones de référence en question peuvent etre des divisions administratives plus ou moins importantes, des villes, des localités, des communes, des villages, etc..

Les questions enumérees au point II ci-dessus, à savoir (i) le lieu de naissance, (ii) le lieu de résidence anterieur, (iii) la durée de résidence au lieu de l'enquete, et (iv) le lieu de residence à une date determinée du passé, sont à l'heure actuelle, les plus utilisées pour cerner la notion de migration interne telle qu'elle a été donnée ci-dessus.

Sur la base des réponses à l'une ou l'autre de ces quatre questions, on peut classer la population totale d'une zone en migrants et non migrants. Il serait utile de classer ensuite les migrants selon diverses caractéristiques comme l'âge, le sexe, l'etat matrimonial, la profession, la branche d'activité, le nombre d'enfants nés vivants (pour les femmes de 15 ans et plus), etc.. Une question sur les raisons de la migration serait aussi intéressante à poser.

On passera maintenant en revue les concepts et definitions qui pourraient être proposés dans le cadre d'une étude sur la migration interne à la lumière des expériences des pays de la région africaine et des recommandations internationales (Nations Unies, 1980).

Lieu de résidence habituel

Il s'agit du lieu géographique ou la personne enquêtée/recensée réside habituellement. Il peut être le même que celui où la personne se trouve au moment de l'enquête, ou que son domicile legal, ou il peut être différent.

Lieu de naissance

Le lieu de naissance désigne la division administrative ou la personne enquêtée/recensée est née, ou bien où résidait la mère au moment de la naissance. Il serait également utile de recueillir des renseignements sur la grande division administrative ou la localité ou se trouve le lieu de naissance, ou sur le pays de naissance pour les personnes nées à l'étranger.

Lieu de résidence antérieur

Désigne la subdivision ou la grande division administrative, ou le pays étranger, où la personne enquêtée/recensée habitait immédiatement avant de s'installer dans la division administrative où elle a maintenant sa résidence habituelle.

Lieu de résidence à une date déterminée du passé

Il s'agit de la subdivision ou de la grande division administrative ou le pays étranger, où la personne enquêtée/recensée habitait à une date déterminée précédant l'enquête.

Le choix de la date de référence devrait être dicté par les besoins spécifiques de chaque pays. Neanmoins, il est suggéré que l'on adopte si possible comme date de reference un an avant pour les enquêtes par sondage et cinq ans pour les recensements.

Il est nécessaire de prévoir la collecte des données sur les nourrissons et les jeunes enfants qui n'étaient pas encore nés à la date de référence choisie.

Durée de residence

La durée de résidence est la période, exprimée en années révolues, pendant laquelle une personne a résidé dans son lieu de residence habituel.

Selon certaines pratiques africaines, les personnes qui ont été absentes au cours de périodes de moins de six mois chaque fois ne sont pas considérées comme ayant interrompu la durée de residence.

TABLEAUX A ETABLIR

Le programme de mise en tableaux des données sur les migrations internes devrait être élaboré en fonction des besoins nationaux et compte tenu des questions pertinentes qui ont été posées lors de la collecte de ces données.

On donnera ci-après, à titre indicatif, une liste de tableaux a établir dans le cadre d'une étude portant sur les statistiques de migration interne. Cette liste s'inspire des expériences de certains pays africains, notamment le Ghana et la Haute-Volta. (voir reference bibliographique)

(i) Population selon la durée de residence dans la localité, la grande division administrative, l'âge et le sexe;

(ii) Personnes âgées de ... ans et plus selon le lieu de résidence habituel, le lieu de résidence à une date déterminée du passé, l'âge et le sexe;

(iii) Population selon le lieu de résidence habituel, la durée de résidence, le lieu de résidence antérieur et le sexe;

(iv) Population selon l'âge et le sexe, le lieu de présence au moment du recensement et le lieu de naissance;

(v) Population selon le lieu de naissance par rapport au lieu de présence au moment du recensement, l'âge et le sexe;

(vi) Population selon l'âge et le sexe et le lieu de résidence antérieur par rapport au lieu de présence au moment du recensement;

(vii) Population selon l'âge et le sexe, le lieu de naissance par rapport au lieu de présence au moment du recensement et la durée de residence;

(viii) Population selon l'âge et le sexe, le lieu de présence au moment du recensement et la durée de résidence;

(ix) Population selon le sexe, le lien avec le chef de ménage, le lieu de naissance et le lieu de présence au moment du recensement.

(x) Population selon le sexe, le lien avec le chef de ménage, le lieu de presence au moment du recensement et le lieu de résidence antérieur,

(xi) Ponulation selon le sexe, l'effectif des ménages, le lieu de résidence habituel et la durée de résidence;

(xii) Population active, selon le niveau d'instruction, le lieu de résidence habituel, la durée de résidence, l'âge et le sexe;

(xiii) Population selon le sexe et le niveau d'instruction, le lieu de présence au moment du recensement et le lieu de naissance,

(xiv) Population selon le sexe et le niveau d'instruction, le lieu de présence au moment du recensement, la durée de résidence et le lieu de naissance par rapport au lieu de présence au moment du recensement;

(xv) Population selon le sexe, le niveau d'instruction, le lieu de présence au moment du recensement et le lieu de résidence antérieur;

(xvi) Population migrante selon le sexe, l'état matrimonial, le lieu de naissance par rapport au lieu de présence au moment du recensement et la durée de résidence;

(xvii) Personnes agées de .. ans et plus selon le sexe, le type d'activité et le lieu de présence au moment du recensement, l'âge et le lieu de naissance par rapport au lieu de présence au moment du recensement;

(xviii) Personnes âgées de .. ans et plus selon le sexe, le lieu de naissance, le type d'activité et la durée de résidence;

(xix) Population active selon la profession, le lieu de résidence habituel, la durée de residence, l'age et le sexe.

Le lieu de naissance ou le lieu de résidence antérieur par rapport au lieu de présence au moment du recensement est défini comme il suit :

même ville

même village

une autre ville dans la même région

un autre village dans la même région

une ville d'une autre region

un village d'une autre région

à l'étranger

CONSIDERATIONS GENERALES ET CONCLUSIONS

Les propositions qui viennent d'être faites au sujet de l'amélioration des statistiques sur les migrations internes devraient être examinées à la lumière des besoins nationaux et des conditions prévalant dans chaque pays.

Il est recommandé d'utiliser les enquêtes sur le terrain (recensements et enquêtes par sondage) comme source principale d'information sur les migrations internes, en plus des registres de population et autres fichiers administratifs. Les données sur les migrations internes devraient être recueillies périodiquement à partir de différentes sources disponibles de façon à permettre des comparaisons dans le temps.

Les concepts, définitions et classifications applicables aux statistiques démographiques en général et aux statistiques sur les migrations internes en particulier devraient être normalisés au niveau national afin de permettre de relier les variables obtenues à partir des différentes sources. Ces concepts, définitions et classifications devraient en outre tenir compte dans la mesure du possible des spécificités nationales dans le cadre des recommandations internationales.

Comme on l'a déjà indiqué, il est recommandé de rechercher l'exactitude et la complétude des statistiques sur les migrations internes. Pour cette raison, des mécanismes d'évaluation de ces deux qualités devraient être inclus dans les dispositifs de collecte et de traitement des données en ce domaine.

Enfin, il serait utile de souligner que des recommandations plus élaborées et plus précises seront formulées, notamment en ce qui concerne les concepts, définitions et classifications, au fur et à mesure que des progrès auront été accomplis tant à l'intérieur qu'à l'extérieur de la région africaine dans les études concernant les statistiques des migrations internes.

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PROPOSALS FOR THE IMPROVEMENT OF INTERNAL MIGRATION STATISTICS IN AFRICA

SUMMARY

African countries should take account of the various uses of internal migration statistics, collect information and undertake studies of their population movements.

The main uses of internal migration statistics which are of interest to the African region are the following: (i) basis for the preparation of population estimates of the various administrative subdivisions and regions, (ii) preparation of regional projections of population, (iii) study of population distribution and redistribution, (iv) study of correlations between migration and other demographic variables, in particular fertility and mortality, (v) development planning and administration as well as policy formulation (vi) planning of community recreation and social services, (vii) regional planning.

It should also be noted that internal migration statistics provide a means of assessing the magnitude and direction of population movements which are of concern to the African region, especially movements from rural to urban areas. Also of interest is that the data provide a basis for analyzing the causes and consequences of internal migration.

It is recommended that national survey programmes (population censuses and general demographic surveys) be used as the main source of internal migration statistics. However, some countries, at a relatively advanced stage of research, may also organize special surveys to obtain data on internal migration. Some of the following questions on migrations could be usefully included in the questionnaires of censuses and sample surveys; (i) place of birth, (ii) place of previous residence, (iii) duration of present residence, and (iv) place of residence at a specified date in the past.

In countries where permanent population registers and/or other relevant administrative records do exist, it is recommended to undertake, as far as possible, the necessary improvements so that these registers and records will become a viable and satisfactory sources of internal migration statistics.

It is recommended, for both field surveys and population registers, that appropriate measures be taken for the internal and external checks of the accuracy and completeness of the results.

Finally, concepts, definitions and classifications for demographic statistics in general and internal migration statistics in particular should be standardized at the national level to enable interlinking and valid comparisons between data from various sources. In addition, these concepts, definitions and classifications should be adapted as far as possible to local conditions, within the framework of international recommendations.